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2404 WEST 7th ST.
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KINZIE MILLER—Vice President
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Squeeze Cementing Technique in Cementing Casing for an Initial Water Shut-Off

By Carl B. Bowden
Union Oil Company of California
Santa Fe Springs, California

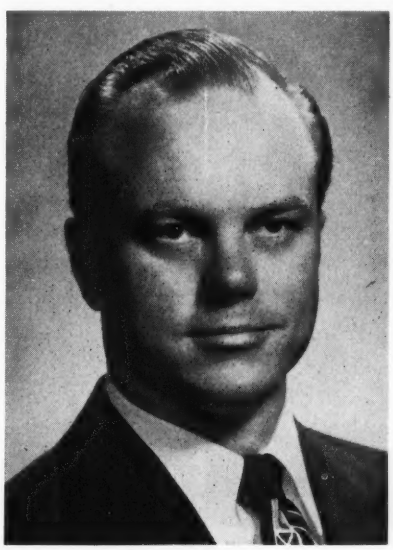
Abstract

Slant hole drilling is necessary to develop a number of oil pools in California and an increased amount of slant hole drilling may be anticipated in the future. Conditions existing in slant holes result in difficulty in obtaining successful initial cementing operations to exclude or shut-off water productive zones overlying the oil production zones. These conditions were encountered in the Sansinena Oil Field, which is located in Los Angeles County, California. This paper compares a hesitation-squeeze cementing technique developed in this field with a previously used scratching method which is recognized as being successful in many areas for initial cementing operations.

The first method employed was to reciprocate the casing and scratch the walls to remove the mud cake before cementing. The first four wells at Sansinena were cemented in this manner and resulted in 75 percent failure to shut-off water on the initial cement job. The average failure resulted in expenditure of 3.1 days time and $3,951.00 in order to shut off the water.

The next forty-two wells were cemented using the hesitation-squeeze technique, which is described in detail in this paper, and which resulted in 12 percent failure to obtain initial water shut-off. The average failure resulted in expenditure of 1.6 days time and $2,129.00 in order to secure water shut-off. The types of cement used in these operations had no apparent effect on obtaining an initial water shut-off. Thus, the hestitation-squeeze technique has been effective in reducing drilling cost not only by reducing the frequency of unsuccessful initial jobs, but also by decreasing expenditures for recementing operations where failures occur.

High final displacement pressures are significant in displacing the mud contaminated areas in the annulus with pumpable cement. This hesitation-squeeze technique is not recommended where depleted or lost circulation zones are exposed to the cementing pressures.



Carl B. Bowden

Introduction

Because of prevailing topography and existence of residential improvements, development of the Sansinena Oil Field in the northeast area of the Los Angeles Basin requires consolidation of surface locations of groups of wells into so-called island drill sites and the drilling of slant holes to the oil productive formations. Many mechanical difficulties in drilling and casing the wells are presented. One problem, from the beginning, was that of obtaining an initial water shut-off. Failures appear to be due to the casing being uncentered in the hole, hole enlargement, low temperatures and geological conditions.

Drilling and Cementing Procedure

The hole conditions, the standard procedures of casing design and cementing are as follow:

Hole Conditions—The wells are drilled with 10⅝" and 9⅞" bits using fresh water clay base mud. Hole caliper logs indicate an enlarged diameter of 13" to 14" in the shale sections, while the diameter in sand sections approximates bit gauge. The holes are deviated from 10 to 50 degrees from vertical at the base of the interval to be cemented.

Temperatures which are recorded by the electric log maximum temperature thermometer range from 112 degrees to 164 degrees Fahrenheit with an average of 130 degrees Fahrenheit.

Casing Size and Design—The casing string generally consisted of a 7" diameter combination string with slotted perforations on the bottom, a whirler type cement collar below which are two baskets 5' apart, and a float collar one joint above the cement ports. The scratchers were spaced 10' apart on the float collar joint on the first four wells. Two centralizers were used to straddle the anticipated water shut-off test holes on the float collar joint in thirty-seven out of forty-two wells. The other five wells had centralizers located from 6' to 33' from the test holes and only one of these wells had a failure to secure initial water shut-off.

General Cementing Procedure—All wells were cemented using cement truck pumps. A minimum of 200 cubic feet of water was pumped ahead of the cement using the top and bottom plug method.

Amounts of Cement Used on Primary Job—An average of 300 sacks of cement is used on the primary cement job. "Slo" type cement was used on eleven wells during the early development. Twenty-three wells were cemented with construction type cement; three wells were cemented with construction cement and an average of 10 percent gel added; and nine wells, out of the last twenty, were cemented with 600 sacks of construction cement with light weight aggregrates and gel added. The present practice is to add 2 percent calcium chloride to the first 100 sacks as an accelerator. The type of cement has no apparent effect on obtaining an initial water shut-off. (Refer to Table I.)

Description of the Move and Scratch Method—The procedure in cementing for an initial water shut-off on the first four wells is referred to in this report as the move and scratch method. The casing was run to bottom, reciprocated, and an attempt was made to remove the wall cake by scratching and circulating with large volumes of mud. The casing, due to lying on the low side of the hole, did not move freely while reciprocating. Thus, the walls were not scratched for as long a period of time as desired because of the danger of freezing the pipe. The cement was mixed and displaced with 0 to 500 p.s.i. and the plugs bumped in a total of 30 to 45 minutes. (Refer to Chart I.))

The first well cemented in this manner had a successful initial cement job, the next three consecutive wells failed to secure water shut-off on initial cementing.

Description of the Hesitation-Squeeze Technique—A different cementing technique was employed in displacing the initial cement on the next forty-two wells, resulting in thirty-seven successful jobs and five failures. It is referred to in this report as the hesitation-squeeze technique and is similar to stage squeeze cementing through a shoe squeeze tool on drill pipe.

The casing is run to bottom and the circulation broken. The cement is then pumped in at varying weights but is predominantly medium to heavy. Displacement is stopped within 300 linear feet of the float collar followed by a waiting period of usually 5 to 15 minutes. Pumping is again resumed for 20 or 30 linear feet followed by another waiting period. This intermittent pumping continues until the cement cannot be further displaced due to the cement setting, bumping plugs or when surface returns of circulation are no longer evident. The total cementing time averages 1½ hours. The waiting periods between displacements are varied within the range cited according to depths and temperatures, but the most important factors in determing this are the pump-down and bleed-off* pressures, after each stage of pumping. If a rapid increase of pump-down pressure occurs, the waiting time is shortened; if no increase of pressure occurs, the interval is lengthened. The increase in the bleed-off pressure after each stage will be relative to the increase in pump-down pressure. Displacement pressure is 0 to 500 p.s.i. at the first

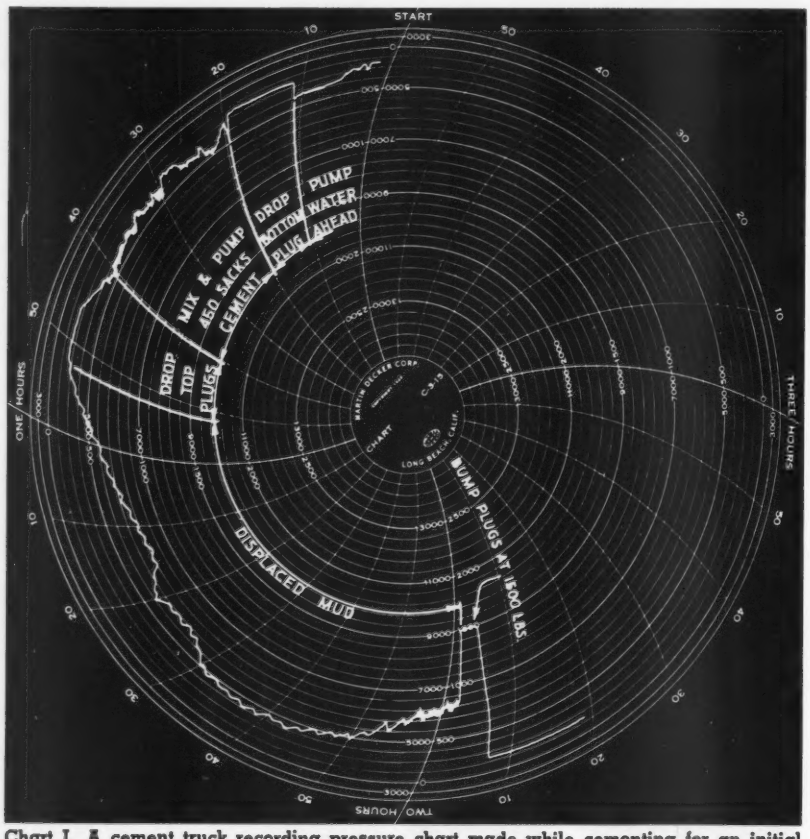
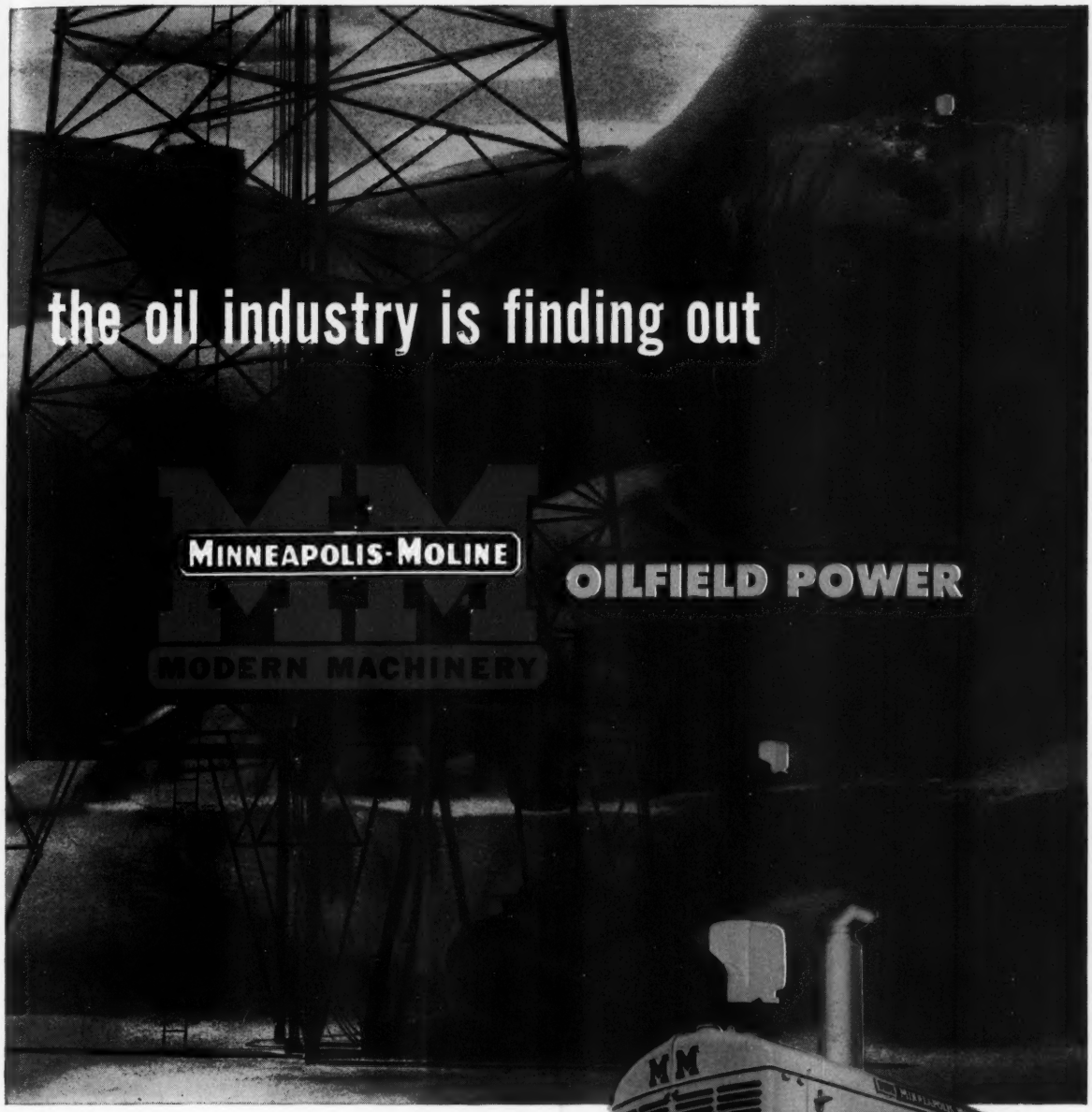


Chart I. A cement truck recording pressure chart made while cementing for an initial water shut-off using the move and scratch method.



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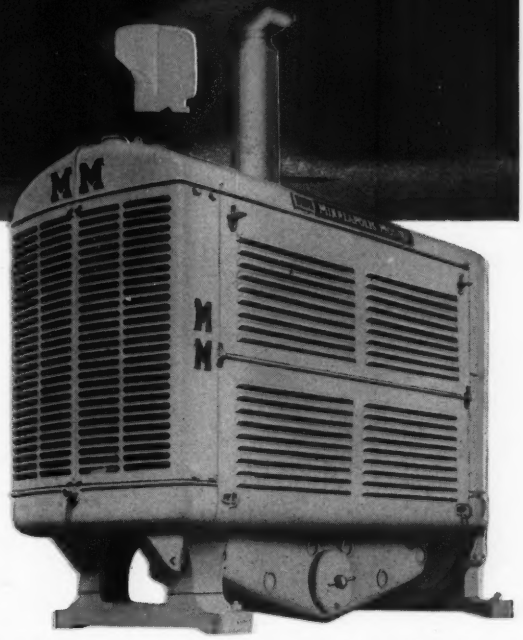

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stopping point. It then increases in increments of 50 to 200 p.s.i. after each waiting period. A final pressure in excess of 1,000 p.s.i. is desired; however, water shut-offs are obtained at less pressure.

There are several variations in time and amounts pumped. One successful method is to displace the final cement by idling the cement truck pumps after the initial build-up pressure occurs. The pressure recorder chart on the cement truck is a useful tool in observing the time-pressure relationship. (Refer to Chart II.)

Theory—A high final pressure, as in squeeze cementing①, is significant, due to stage squeezing of fluid cement into the mud contaminated areas surrounding the gelled cement channels.

Channels of cement slurry, cement contaminated mud, and wall cake are present between the casing and the walls of the hole in any given cross-sectional area a short distance above the ports of the cement collar②.

These cement channels will gel because of dehydration, due to time, pressure and temperature, and will make displacement by cement unlikely under steady pumping conditions. The effect of intermittent pumping of fresh cement, at a slow rate helps to displace the mud contaminated areas with cement as plug flow is approached③. In stage cementing, the pumping continues until the fluids can no longer be pumped, the plugs bump, or surface returns of circulation stop. The contaminated areas are progressively replaced by good cement and this ultimately results in a greater cross-sectional area of competent cement in the annulus, thus decreasing avenues of fluid entry to the casing.

The Sansinena Field has competent beds below the cement ports; hence, with basket protection immediately below, and circulation returns at the surface, it is reasonable to assume the cement is circulating upward. Investigations have not been made to determine that the volume pumped down equals the volume of circulation returned at the surface. There has been no reason to believe that the cement passed down around the baskets and into the perforations as no cement has been found in the perforations below the cementing collar.

If depleted or lost circulation zones occur and are exposed below the cement ports, it is possible the cement will migrate downward to the lower pressure. Therefore, the use of this technique under such conditions is not recommended.

Drill-Out Procedure and Water Shut-Off Test—The cement is allowed to stand a minimum of 14 hours in all wells, following which the cement is drilled out to within 15′ of the cement ports and the plug pressure tested. The effectiveness of water shut-off is tested with a combination gun and tester by shooting test holes in a substantial shale body located as close to the cement ports as possible.

General Geology at the Water Shut-Off Point—The shale bodies above the producing zone in many wells have thin stringers of sand at 3′ to 10′ intervals, which may be water bearing. On occasion, the shale bodies may be fractured.

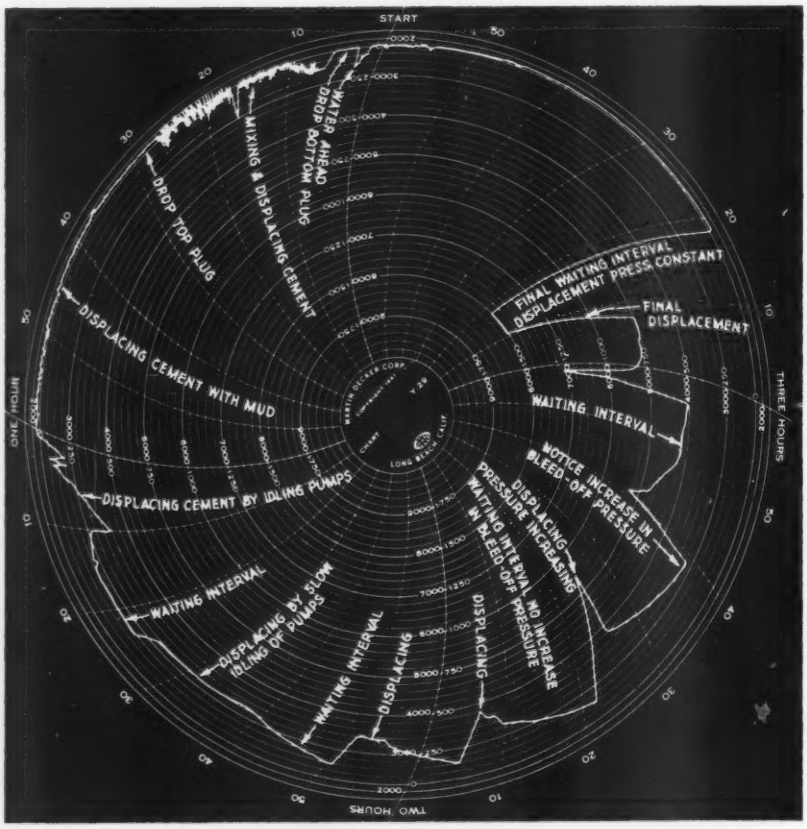

Chart II. A cement truck recording pressure chart made while cementing for an initial water shut-off using the hesitation-squeeze technique.

Note. (1) Two methods of displacing the cement (a) idling and (b) slow pumping. (2) The relative increase in bleed-off pressure with displacement pressure and the final displacement pressure being constant at 1500 P.S.I.

Results

See Table II:

The move and scratch method was used to cement the first four wells and resulted in a successful job for the first well and failures for the next three. The test holes were shot 16′ to 40′ above the cementing ports and the fluid rises were 3500′, 2700′ and 400′ of water and oily mud in tests of failures. In the case of the 400′ rise, the tool plugged after a period of 15 minutes. There were eight separate squeeze jobs, eight tester runs and 9.2 days elapsed time from when the test holes were shot until water shut-offs were demonstrated. This represents 3.1 lost days, an average cost of $3,951.00 per well where initial failure occurred and $2,963.00 per completed well cemented by the move and scratch method.

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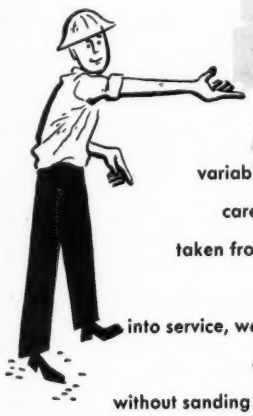

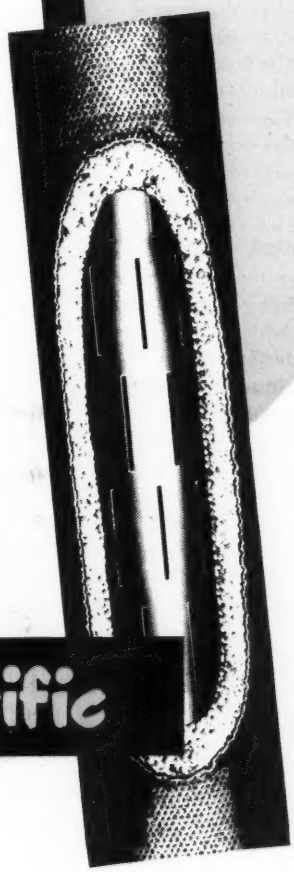

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TABLE I
COMPARISION OF EFFECTIVENESS OF CEMENTING METHODS USING VARIOUS TYPES OF CEMENT

	Types of Cement			
	Slo	Constr.	Constr. & Gel	Constr. & Lt. Wt. Agg.
Move and Scratch Method	3	1		
Initial Successful Jobs	1	0		
Percent Success	33	0		
Initial Failures	2	1		
Percent Failure	66	100		
Hesitation and Squeeze Method	8	22	3	9
Initial Successful Jobs	6	20	3	8
Percent Success	75	82	100	89
Initial Failures	2	2		1
Percent Failure	25	18		11

TABLE II
SUMMARY OF DATA COMPARING RESULTS OF TWO METHODS OF CEMENTING CASING FOR AN INITIAL WATER SHUT-OFF

	Method	
	Move & Scratch	Hesitate & Squeeze
No. of Wells	4	42
Average Time to Mix & Displace Cement	30 min.	3 hrs. (1½ hrs. using 2% calcium chloride)
Initial Successful Jobs	1	37
Percent Approved	25	88
Failures	3	5
Percent Failure	75	12
Total Number Squeeze Jobs Before Water Shut-Off Demonstrated	8	7
Squeeze Jobs Per Initial Failure	2.7	1.4
Total Testers Run	8	7
Retest Per Failure	2.7	1.4
Total Lost Time (Days)	9.2	8.1
Lost Time Per Failure (Days)	3.1	1.6
Average Lost Time Per Completed Well Due to Failure (Days)	2.3	0.2
Average Total Cost Per Failure	$3,951	$2,129
Average Total Cost of Failure Per Completed Well	$2,963	$253

The hesitation-squeeze technique was used to cement the casing on the next forty-two wells. Thirty-seven were successful initial water shut-off jobs and five were initial failures. A series of twenty-six consecutive shut-offs was achieved. The five failures gave only 12 percent failure as against 75 percent using the move and scratch method. These five failures required seven squeeze jobs, seven tester runs and 8.1 days elapsed time before water shut-offs were demonstrated. This resulted in an average of 1.6 days lost time, and an average cost of $2,129.00 per well where failure occurred, and an average cost of $253.00 per completed well using the hesitation-squeeze cementing method.

The hesitation-squeeze technique has lowered direct drilling cost because of (1) higher frequency of successful initial cement jobs to shut-off water and, (2) reduced squeeze jobs and retest runs per failure in the initial cement job.

One of the unsuccessful jobs using the hesitation-squeeze method occurred because of too long a time period between pumping intervals, causing the cement to set-up inside the casing before it could be squeezed out. Another was due to the final pressure being only 400 p.s.i., 1½ hours after mixing, and the plugs bumped. An insufficient amount of cement was used on the third failure where only 75 sacks of cement were used. Two failures are unexplainable.

The displacing time interval has been reduced from an average of 3 hours to 1½ hours by using 2 percent calcium chloride as an accelerator.

Conclusions

An investigation was made comparing two methods of cementing the water string for the primary cement jobs under difficult hole conditions. The study includes forty-six wells in the Sansinena Oil Field.

Data from the investigation indicate the hesitation-squeeze technique was successful in increasing the initial successful cement jobs from 25 to 88 percent. It has reduced the lost time from 3.1 to 1.6 days and cost from $3,951.00 to $2,129.00 per failure. The average cost of failure per completed well has been reduced from $2,963.00 to $253.00.

The success of the hesitation-squeeze method is determined by staging the final cement with predominantly high pressures of over 1,000 p.s.i. However, water shut-offs are obtained with less final displacement pressures. The type of cement used had no apparent affect on the results.

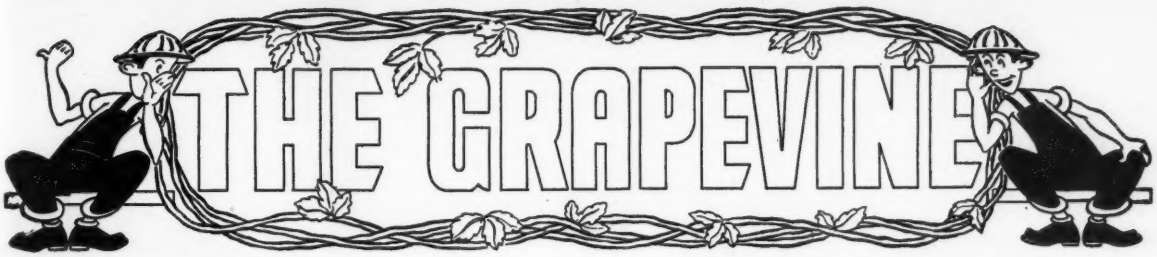
Hesitation-squeeze cementing for an initial water shut-off is not recommended for cementing combination strings in depleted or lost circulation zones.

It is recognized that this report compares four wells using the move and scratch method with forty-two wells using the hesitation-squeeze technique to cement the water string for initial water shut-off. The hesitation-squeeze technique demonstrated improvement in obtaining initial water shut-off from the beginning and became standard cementing procedure. The comparison is valid because the wells are in the same oil field, have similar hole conditions and casing strings.

Acknowledgment

The author wishes to thank the Management of the Union Oil Company of California for permission to publish this paper. Sincere appreciation for assistance in preparation and for constructive criticism is expressed to Messrs. J. T. Ledbetter, C. F. Bowden and M. G. Arthur of

(Continued on Page 44)



The Petroleum Club will on Saturday, September 12, at some so far undetermined rendezvous, stage the barbecue to stop all barbecues. This affair will diverge from the usual pattern and will take the form of a safari, probably through the jungles of Brea to some remote Orange County Nairobi. In any case, it is being engineered by Jim Kelley, the Hillman Kelley m'bassa who will have as his aides some of the industry's topmost talent. Among the delectable dishes that are likely to be served at this African luau are gigot of gnu, fricasseed wapiti, grilled giraffe jugulars, lionburgers, and broiled zebra haunch with your choice of white or black meat. This, of course, is always providing that the raw materials can be procured at the local butcher shop.

In view of these goings on, don't be surprised if during the next day or two you see a scad of pith helmeted adventurers, with pointed beards, monocles, and bare knees, striding through the derrick groves in the van of heavily loaded native pack bearers, dressed in pocket handkerchiefs. They are merely working out for the big event. Our advance information is that Wendell "Bring 'Em Back Whether They Are Alive Or Not" Jones, the eminent Bethlehem explorer who recently journeyed to England and discovered the coronation, has consented to be M.C. for this occasion. Also, Roy Johnson and Jim Hughes, a pair of big game hunters whose adventures in search of a big game of gin rummy make Frank Buck look like Frank Thirty Cents, have promised to furnish the entertainment or die in the attempt. Watch the billboards for further announcements!

Incidentally, while milling about the Petroleum Club the other lunch hour we met Bob Roberts, the Standard Oiler, better known in these parts as Mr. Public Relations. He was accompanied by Don Jones, a seemingly friendly young chap from San Francisco headquarters, but you never can tell—out of this quite casual contact came a most distressing and embarrassing incident. Don, we were told, was a sort of radio and television expert for Standard Oil Company, and maybe he is, but we found him expert also in certain nefarious enterprises, particularly of the speculative type, that have no relation whatever to either radio or TV. In fact, during the short post-dessert period which was devoted to a species of pecuniary mayhem, known as showdown, this innocent appearing denizen of the Bay area divested us of all detachable appendages and appurtenances, and left us flatter than spilled milk. We shall be pleased to furnish free of charge a full description of the Jones scion, who is a viper in sheep's clothing if we ever saw one, to those who may be planning to venture into San Francisco unprotected and are hoping to return with undespoiled wallets. Meantime, we have turned the facts over to the Society for the Protection of Subnormal Showdowners and, who knows, maybe they can still recover some of the loot!

Back about 1930 we became involved in a series of royalty suits during which we became known as "everybody's witness." That was probably because being decidedly indecisive, as it were, it wasn't easy at any time to tell which side we were on. In any case, it was a rather interesting experience in which we acquired a little better understanding of legalistic lingo and a little wider acquaintance among the members of the and/or fraternity. In no time, indeed, we had grown thoroughly familiar with such abstruse terms as writ of mandamus, bill of certiorari, filet of sole meuniere, laches and estoppel, and spaghetti au gratin. Of course, it is true that we hadn't the faintest idea what these expressions meant but they spiced up our vocabulary no end and gave us an amazing prestige among the illiterates in our neighborhood.

All of this comes to mind because of a recent **billet-doux** from the noted Stanford rooter, Homer Steiny, announcing the resignation of Tide Water Associated Oil Company's Harrison Guio. Harrison was one of the patient oil lawyers who attempted to rationalize our mumblings during the suits aforementioned, **a priori** and **ad valorem** if we may be forgiven for using a couple of nasty terms. Although his efforts to make sense out of our gibberish were fruitless, nonetheless, since that time he has always treated us as if we had full possession of our faculties, an extremely flattering and somewhat rare attitude that we have greatly appreciated. And so, as Harrison now launches out into private practice, he carries with him our very best wishes for a nice rosy future full of favorable verdicts and generous retainers.

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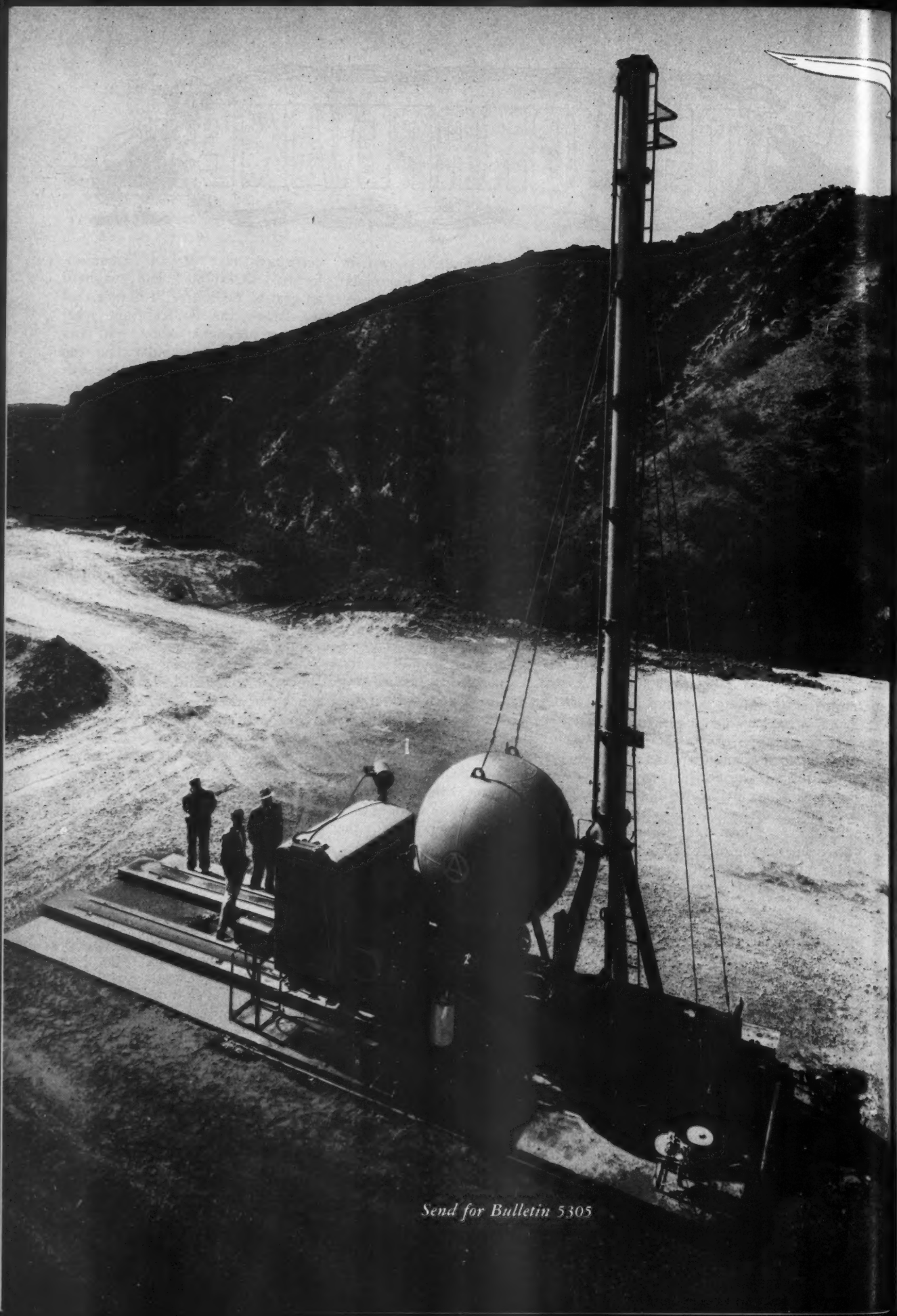

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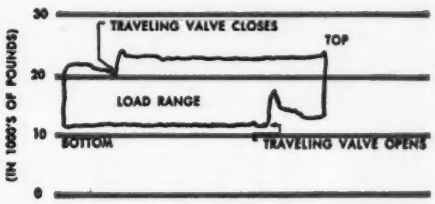

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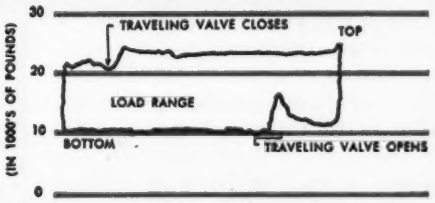

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production men. He became widely known and admired in the oil industry, and his organization prospered. By the time he died in 1935, indeed, it was well established, and no doubt in his later days he took a particular pride in that fact as well as in the knowledge that he had left seven sturdy sons to carry on in the family tradition and to enlarge on his own ambitions and achievements.

He was succeeded in the presidency of the Company by the oldest of his boys, also Sumner Benedict Sargent, known familiarly but somewhat inaccurately now as "Slim." Under the direction of S.B. the Second and with the aid of several other resourceful scions of the Sargent House, the firm has meantime expanded tremendously and is experiencing acute growing pains at the very moment that this is being written. Whether by accident or design, the five Sargent boys who are now concerned with administration of the company in its diverse interests and activities, have a peculiarly apt variation of qualities and talents that fit them very neatly into an effective top management pattern.

The president, Slim, is a graduate in engineering from University of California at Berkeley. Prior to that he attended UCLA where he played on the varsity football team, but his real forte is mathematics—the mathematics of stresses, strains, vibrations, oscillations, and other abstruse phenomena that we ordinary mortals fortunately don't have to worry about. Mark you, he is no absent-minded professor! On the contrary, he is actually a completely normal sort of a guy to whom understanding of mathematics has just come easy, and naturally he likes it. Since also it has an important place in his business, he applies it, so there you see a talent that is both a hobby and an occupation. Of course, Slim has some other hobbies, too. When the occasion is right, he will take a little time out to go photographing or fishing, and if you think the only books he ever reads are texts on engineering, start him off some time with a line from Robert Burns' "Tam O' Shanter," and if he doesn't recite the whole poem before you can break away, you are to be complimented on your perspicacity or something.

SKILLED WITH A SKILLET

One of Ventura's favorite citizens and a gentleman of fine repute throughout the western petroleum industry is Fritz Huntsinger, president and owner of Ventura Tool Company. Fritz is a native of Eimeldingen, Baden, Germany, fought valiantly in the first world war on the side of his homeland, and, indeed, was a British prisoner of war at the conclusion of hostilities in 1918. He came to California in 1923, landing first in Oxnard, but in no time at all had found his way to Buena Ventura, and he has been a pretty substantial inhabitant of that exciting bailiwick ever since.

He began work in the oil business with Schwab Tool Company in 1924 and in about six years had been so impressed by the potentialities of petroelum that he organized his own business, the Ventura Tool Company, and he has never been sorry a minute. Fortune has smiled warmly on Fritz but that is largely because Fritz has smiled warmly on fortune, in fact, he has smiled warmly on everybody. During the 30 years that have elapsed since he came here, an immigrant from an alien country, he has made more friends than Santa Claus, and he has thoroughly established himself both as a successful business man and as an upright and forthright member of good American society. He has built a consequential manufacturing concern and he has built a personal reputation that together must now give him a nice warm feeling inside.

Fritz is definitely an extrovert. He loves people and he loves to potter over a hot stove. Well, what better way could you find to bring people around than to prepare for them a mess of the right kind of pottage. That sort of thing he does and does well and many on the Pacific Coast can testify to his skill with the skillet and his graciousness as a host. He is an erstwhile vice president of PPP and his culinary competence is well recognized by the members of that august organization, too.

Another of the Huntsinger hobbies is an exclusive little segment of Ventura citizenry that calls itself the Rest & Aspiration Club. It meets every Tuesday evening in unpretentious quarters behind the Sportsmen's Cafe, just at the end of Rest & Aspiration Alley, and its roster includes by all means the cream of the local residential crop. Into the meetings of this small coterie, Fritz Huntsinger fits like the key piece in a jigsaw puzzle, and he loves every blessed minute of them.

Executive vice president of Sargent Engineering Corporation is a modest but by all means competent member of the family, E. J. Sargent, better known as Ted. He is the inventor of the Company's rodless pump and sundry other items of more than ordinary importance to industry. Ted is a Loyola grad, received honorable mention for tackle on the All American football team, and could probably have made a good living as a professional if he hadn't been more interested in other ways of carrying the ball. In his spare moments he sometimes allows himself to be inveigled into a light game of gin rummy and is said to have a rare knack for gathering together colorful and mildly profitable groups and sequences. Did you know, by the way, that gin rummy takes its name from the Sanscrit word "jin," meaning "performance," and the common American colloquialism "rummy," meaning "odd" or "queer."

George Sargent, secretary treasurer of the firm, also general sales manager, is another football player from Loyola. He was named All Coast center in 1932 and played in the famous game with Southern California that year when the Trojans just squeaked through to a 6 to 0 victory. George is the legal whiz of the organization. He is a graduate in law, has spent some ten years in private practice, and has had an all-round experience that is a valuable asset in the widely ramified interests of the corporation. However, it is in sales that he excels, and there is no betetr evidence of his expertness than his ability to dispose of the ever mounting plant capacity and to create an ever increasing demand for its engineering services and skills. And, say, isn't it queer in this connection, that goods transported by rail are shipments while those that travel by ship are cargo?

Out in the oil fields, the two best known Sargents are Pert and Bill, the younger members of the brood and a pair of really likable people. Pert is in actuality Hugh L., a stocky, pleasant sort of a chap, who does a nice job of cultivating friends for the company by the simple process of being friendly. Recently appointed ass't general sales man-

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ager, he is in charge of hydraulic sales in various areas, including the Rocky Mountain district; takes care of the uptown contacts in Los Angeles in a very adequate way; and is altogether an admirable ambassador for the corporation. Pert is also a grid great—he played guard with USC, performing with especial distinction in the Trojan-Notre Dame fracas of 1941, and in all scheduled games giving an excellent account of himself. He is a popular member of the Petroleum Club where he is soundly feared by all the other domino players, excepting perhaps Jim Kelley, because of his remarkable ability to peg from any position.

William H. "Bill" Sargent, foreign sales manager, is another product of Loyola and distinctly a credit to this noted institute of learning. He played end on the varsity football team, later became head football coach, and wound up as grid mentor to such professional squads as the Hollywood Rangers and the Los Angeles Bulldogs. Bill is an excellent after-dinner speaker with an endless fund of sports experiences and episodes that he recounts in a very interesting and entertaining way. He has traveled extensively in foreign oil fields and is an active and energetic member of the Los Angeles chapter Nomads of which he is currently secretary. He is well regarded wherever he goes, and since we have come to know him have found that easy to understand.

The Sargent Engineering Corporation today covers some 90,000 square feet, and from that lone rod rotator on which the firm was founded have sprung great shops in which are hundreds of the most modern machines. The plant is at the moment making arrangements for the installation of 150 more, and we rather imagine that Sumner Benedict Sargent the First is well pleased to have entrusted the consummation of his dreams to such an ideally disposed and completely productive progeny.

From Vernon King, the consulting fellow, comes a Wyoming communique, datelined from Billings, Montana, and apparently written by some local enthusiast who is about as retiring as a peacock with a newly decorated tail. According to this bashful scribe, the Equality State is something more than the equal of anything else on earth. We are told in far from modest terms that its mountains are steep, its rivers are deep, its women don't weep, and its bourbon is cheap. However, after all the eulogistic comment is ended, we note that Vernon somewhat witsfully draws a sketch of a domino—a double-six, too—at the bottom of the page. This shows exactly where his mind was while he was pottering about the Big Piney, the Middle Piney, and the Little Piney. That old nostalgia expresses itself in queer ways, and when it takes a holt, it ain't easy to shed, effen yuh know whut we mean.

By way of last minute news, the Desk & Derrick Club of Ventura is meeting at Huntsinger's Corral on September 1 for its annual bosses' roundup, and we hear tell they's gonna be tall doins. All the local steers has took to the hills and hits moron likely they won't git back till the dainger of eckstingshon has varnished. Comes news also of the National Convention of Desk & Derrick Clubs at Denver, and an invitation to cocktails in the Onyx Room at the Brown Palace Hotel, on September 10. Wisht they wouldn't tempt us thataway! And there we leave you to your own devices. Now, shake hands and come out fighting!

Daniel F. Sullivan, Ventura, Calif., geologlist for Continental Oil Company, has been promoted to division geologist, with headquarters at Bakersfield, it was announced recently by R. M. Barnes, Los Angeles, western region exploration manager. He succeeds E. D. Sherman, who has resigned from the company.

A native of Dallas, Tex., Mr. Sullivan received his bachelor's degree in geology from the University of Texas. He joined Conoco in 1948 at Los Angeles as a geologist and transferred to Bakersfield in early 1951. He has been a geologist in Conoco's Ventura division since late 1951.

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Field Development

North Kirby Hills Gas Discovery Scored

Success was a willing companion to Shell Oil Company's venture for new natural gas production at Solano County's North Kirby Hills area. There the company put on production its Unit No. B-1 wildcat on Sec. 7-4n-1e at a plugged depth of 3554 ft. for a yield of 5,000,000 cubic ft. of gas a day through three-quarter-inch bean. Shell's achievement has opened a new field three miles north of the closest production in the Kirby Hills gas field, found eight years ago by the same company. Kirby Hills field wells are drawing from sand found around 2300 ft. in the Domengine zone. Therefore, it appears that the discovery well at North Kirby Hills is tapping a zone more than 1000 ft. deeper than the sand open at Kirby Hills field. Shell carried the project to a total depth of 4000 ft. before plugging back. Miller & York, contractors, can take a bow for putting the discovery well down.

At Honker Bay in Solano County, Union Oil Company's Union-Brazos-Ward No. 1 wildcat is preparing to drill on Sec. 30-3n-1e, with Dunlap & Graham in charge.

In the Tubbs Island area of Sonoma County, Tide Water Associated is drilling at 2850 ft. with its Noble No. 1 test on Sec. 29-4n-5w. Brown Drilling Company is doing the chores on the project.

Brown Drilling also is busy with D. D. and Dorothy Dunlap's Thomas Comm. No. 1 test on Sec. 25-6n-3e at Cortland in Yolo County. At last reports digging was at 1600 ft. Interest in the well is shared with Natural Gas Corporation, which the other week abandoned its Peters No. 1 on Sec. 9-8n-1w at Chicahominy. This earlier test quit at 3704 ft.

Near Gilroy in Santa Clara County, LeRoy C. Gould's Gilroy City No. 1 explorer on Sec. 9-11s-4e is down 3520 ft. and moving in larger rig. The venture is credited with picking up oil showings somewhat higher. The Texas Company is among larger companies holding ground in the vicinity of the test.

Union Pacific Railroad's No. 577 at Wilmington with Terminal Drilling Company handling the work. Left to right: J. C. Nicks, floorman; Ray Paxton, head well puller; Roy Peterson, derrick; George Stubblefield, floorman.

Livermore Test Quits

Having drilled to 3511 ft. without visible encouragement, The Texas Company's Signal-Hancock-Christensen No. 1 wildcat on Sec. 26-2s-23w at North Livermore in Alameda County has been abandoned.

At Torrey Canyon in Ventura County, Texaco's Hunter No. 2 wildcat on Sec. 6-3n-18w is drilling around 4000 ft., with K. L. Kellogg & Sons in charge. The drill site is a half-mile north of the company's Hunter No. 2 and about three-quarters of a mile northwest of Union Oil's fabulous deep development. In the event The Texas Company's current effort is successful in smoking out production in the lower formations, the No. 1 will probably be paid a return visit and be whipstocked and redrilled. The latter has been idle at 10,150 ft. for several months. Union Oil's Torrey No. 92 on Sec. 5-3n-18w is drilling below 13,500 ft. Speaking of Union, it brings to mind that company profits soared with net earnings for the six months ended last June 30 amounting to $17,807,644, equal after preferred dividends to $3.30 a share on the 5,266,270 shares of common stock outstanding. This compared with $13,333,234, or $2.45 a share, reported for the first half of last year. Second-quarter earnings amounted to $9,922,847, or $1.85 a share, against $6,633,414, or $1.22 a share, in the June quarter of 1952. Net earnings for the 1953 periods do not include a non-recurring aggregate gain of $7,648,178, after income taxes, of $2,568,900, resulting from the sale of the company's fleet of six tank ships and its investment in capital stock of Trans Mountain Oil Pipe Line Company, which was credited directly to net earnings retained in the business, according to

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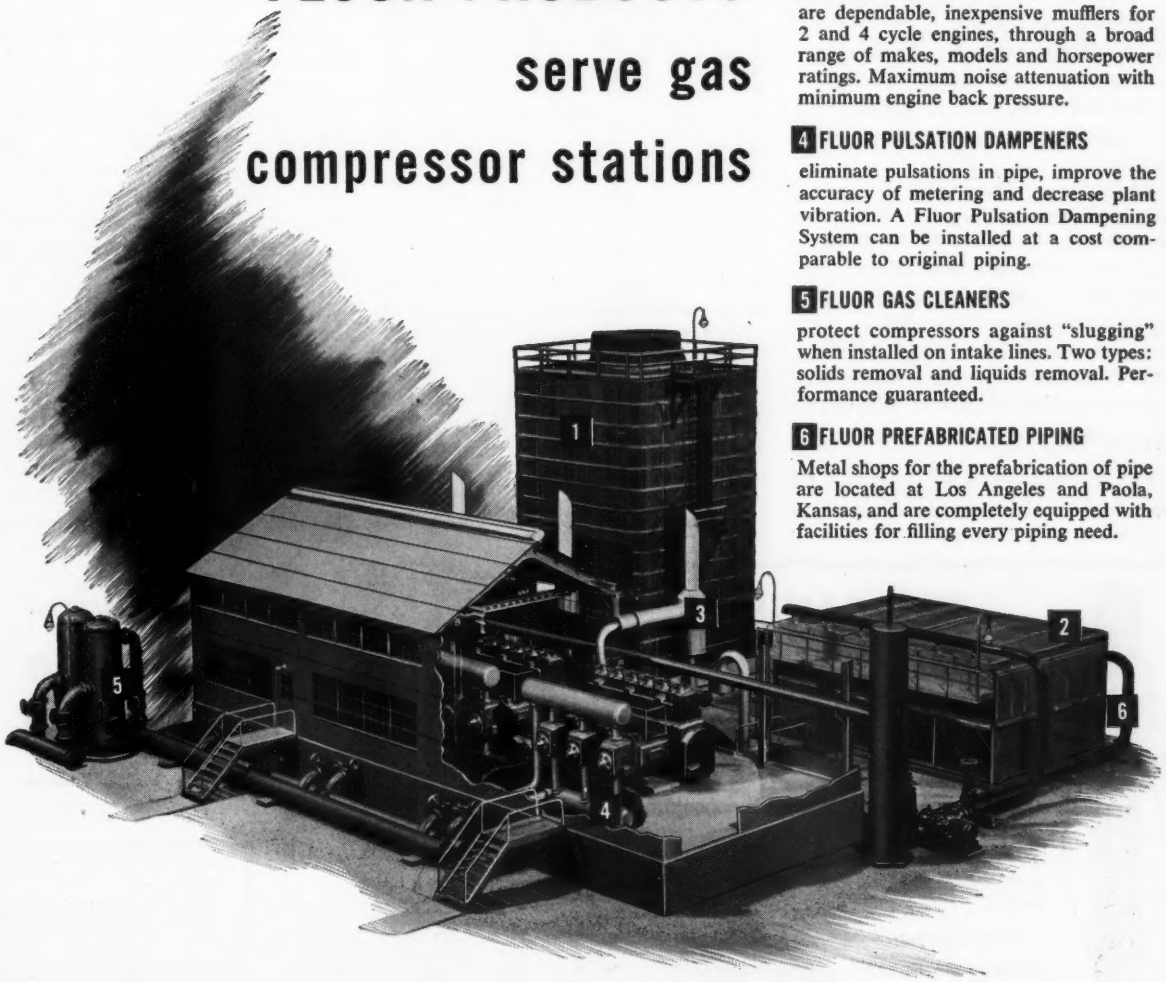

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a report by President Reese H. Taylor. Union's net crude oil production in June was 105,500 barrels a day.

Intex Oil's Capco No. 5-1 wildcat on Sec. 5-1n-21w at Oxnard has faded out of the drilling picture at 7390 ft. On Sec. 32-2n-21w, Standard is digging at 8288 ft. with Scholle-Livingston No. 1. The company's recent discovery, McInnes No. 1 on Sec. 6-1n-21w at present is producing 103 barrels of 20.1 gravity oil and 20,000 cubic ft. of gas a day.

Near Fillmore, Standard's Sespe Ranch No. 1 on Sec. 27-4n-20w has reached 1500 ft. and is continuing on down.

At Sulphur Mountain, the company's Freeman No. 1 wildcat at this writing is down 7550 ft., after an electric log run to 7382 ft. The well, on Sec. 21-4n-22w, is a Dunlap & Graham contract job.

Operations are moving ahead at 6850 ft. with Standard's State No. D-2 on Sec. 35-2n-23w at Montalvo.

Rincon Test Fails

Land south of Rincon failed to give Richfield's Smith Hoffman No. 1 wildcat well commercial production and the project has been abandoned at 8107 ft.

A new drilling job is preparing to go to work in the Ojai area under the banner of Gordon W. Phillips. His Bailey No. 3 will drill on Sec. 7-4n-22w.

In the Ventura Avenue field, Lloyd Corporation is testing its William Sexton No. 3 on Sec. 20-3n-22w. It is bottomed at 15,761 ft. and appears to have set up a new record by becoming the deepest producer in the field. A contract job, Drilling & Exploration guided the destiny of the well.

Following a series of tests, Los Nietos Company has given up its Los Nietos-Gulf-Philbrick No. 66X-11 on Sec. 11-9n-34w at Orcutt, Santa Barbara County. Gas and oil showed at a number of intervals, but of a strength below commercial requirements.

Monterey Oil Company's L. C. Thomas No. 1 wildcat test on Sec. 15-9n-33w at Bradley Canyon is drilling in hard chert at 6640 ft.

In Ventura County's South Mountain area, Shell Oil is set to drill another cluster of air-drilled wells. Such wells are carried to 1000 ft., or approximately, with air as a circulating medium rather than mud, due to the instability of formations. Surface casing is normally cemented in these particular jobs between 850 and 1050 ft. and from then on drilling is aided by mud. Bell & Burden have contracts on at least a couple of new wells there.

Jumping back to Northern California gas areas, B-N Development Corporation, or in other words Blackwood & Nichols, is digging at 2000 ft. with its Duff Unit No. 1 wildcat in the Eureka area of Humboldt County. The company will not be content until everything has been looked over to 5000 ft. Engineering is in the hands of Ross Cabeen & Associates.

In the Petrolia area, West Coast Oil Corporation's West Coast No. 1 prospect job on Sec. 21-1s-2w is digging at 1840 ft. Brookline Oil Company is understood to have a working agreement with West Coast in the well and holds an interest in 400 acres adjoining the play.

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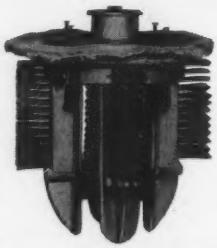

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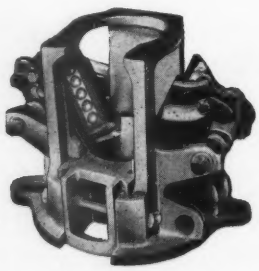

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Seaboard Oil Plans Cholame Wildcatting

Seaboard Oil Company is all set to embark upon wildcat drilling at Cholame, northwest of San Miguel in San Luis Obispo County. Location of the first well, Humble-Freeman No. 72-17, is 990 ft. south and west from the northeast corner of Sec. 17-23s-13e and near the San Luis Obispo-Kern County line. The area has on several occasions in recent years rebuked wildcats by giving them nothing much more than dust. Not many months after Cuyama Valley came into the picture, Cholame was the scene of a number of shallow wildcat wells, north and east of the new Seaboard location. C. W. Colgrove undertook tests on the Jack property. They proved dry. As common in many San Luis Obispo County sectors, the area outlined for wildcatting was dotted with seepages in the not too distant past.

San Luis Obispo County production possibilities intrigue Havenstrite Oil Company. This is borne out by the beginning of work on the company's Havenstrite-Cleary No. 1 wildcat on Sec. 8-25s-14e. The drill site is approximately three-quarters of a mile southwest of Standard's Cleary-Hillman No. 44-8, drilled to 3850 ft. and abandoned early in 1951.

Over in San Benito County, Strata Oil Co.'s Strata No. 1 wildcat on Sec. 19-16s-11e at Griswold Canyon near Vallecitos is drilling below 600 ft. Location is roughly three-quarters of a mile east of Panoche Petroleum Company's Panoche No. 1 test. This earlier well was bottomed at 720 ft. and for a time accounted for several hundred barrels of oil in 1945. The Strata organization is made up of E. A. Fritz, Ralph Antles and Paul Danielson.

In the Vallecitos area, the Donald Frankel, Operator, Lewis-USL No. 1 wildcat is in the preliminary stages on Sec. 34-16s-12e.

At Hollister, Bell Petroleum Company's Jacques No. 1 wildcat has reached a depth approximating 5700 ft. or so. It is on Sec. 20-12s-5e and on a farmout from Balken & Krug, north of the latter's Ferry-Morse No. 1 well.

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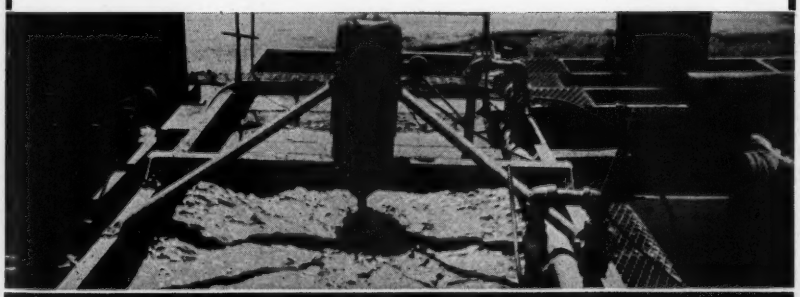

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Roberts Island Test

Monarch Oil Company is ready to start its scheduled 6000-ft. wildcat venture on Sec. 26-1n-5e in the Roberts Island area of San Joaquin County. Location is on an 1800-acre block in the Woods estate property, subleased from a number of organizations, including Superior, Texaco, Standard and Union.

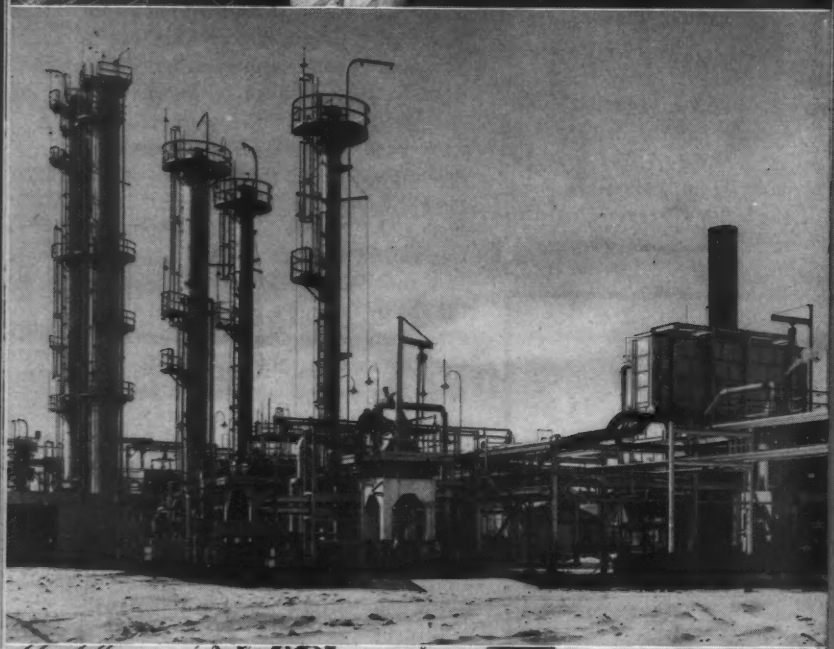
Trico Oil & Gas Company is approaching the spudding stage with its Howard No. 1 on Sec. 36-11s-14e, a northwest extension test of the Moffatt gas field in Madera County.

Six miles southeast of the town of Helm in Fresno County, Valley Producing Company's new No. 1 well on Sec. 16-17s-18e is putting out an estimated 125 barrels of 38.5 gravity oil a day from 6760 ft. in Miocene sand. The well is on a 160-acre lease in the Wheatville sector leased from Theodore F. Brix, Mr. and Mrs. George A. Frances of Fresno and Mrs. Pearl Turecek of Burrel. Others interested in the play include James L. Aydelott, Howard Haak, Antone Jutesen, D. S. Kellogg, Clarence Stay, Maynard L. Cannon, Mrs. A. R. Gomes, Max Koren and W. J. Fortier. Aydelott is the son of the late George C. Aydelott, associated with Mohawk Petroleum Company around the turn of the century. The elder Aydelott also was the prime mover of the first artificial ice plant in San Joaquin Valley—the Hanford Ice Company. In addition, he was a majority stockholder in the Riverdale First National Bank. The producer was put down on contract by Gibson Drilling Company.

On the eastern edge of the Raisin City field, Douglas H. Graham as operator is moving ahead with opening work on Morris No. 1 test on Sec. 19-15s-18e. Present output in the Raisin City field finds its source in sands of Miocene and Eocene age.

Fruitvale Try Digs

A few miles north of production in the Fruitvale field, Intex Oil Company's Capital Co. No. 85 test on Sec. 5-29s-27e continues to make hole ahead below 3400 ft. The project is aimed for a look at the Etchegoin, Chanac and Santa Margarita oil sand zones, which should come to light before 4500 ft. have been reached. Humble Oil, Signal Oil & Gas and E. A. Bender are among those holding leases in the vicinity of the Intex try.



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In the South Coles Levee field Kern County Land Company is ready to begin drilling KCY No. 67A on Sec. 12-31s-25e. It is designed to prove a gas sand which at present is not putting out in the area. The well will be taken down to about 6800 ft. for a gander at a gas sand which celebrated last New Year's day by causing a blowout at adjacent location of KCY No. 67-12. The sand marked for interrogation is an Etchegoin stringer. This sand apparently failed to appear in wells immediately westward, but comes from the east and pinches out as it travels up dip in the field.

When Ohio Oil Company's KCL-A No. 72-4 deep test on Sec. 4-32s-26e in the Paloma field drills beyond 20,521 ft. it will shatter the world's record established by Superior Oil Company with a well put down and abandoned some years ago in Wyoming. The Paloma try is only a few hundred feet from the record depth.

Barnes & Shadrick Core Drilling Company's Amfitheatrof & Associates-Barnes No. 1 exploratory well on Sec. 23-32s-31e in the Cummings Valley area is digging at 960 ft. It is located about 11 miles west of Tehachapi, a town hit hard a year or so ago by an earthquake.

At West Mountain View, MJM & M Oil Company and Atlantic Oil Company have pulled out of their Blackburn No. 1 wildcat on Sec. 19-30s-29e at 5165 ft. An old well, the project originally flew the banner of Slim Hampton, Inc. It was redrilled and deepened for a test of a possible new fault block about one and one-half miles east of the MJM & M-Atlantic Nozu sand discovery. On the financial side MJM & M's new issue of 265,232 shares of stock offered to stockholders through rights have been fully subscribed and the books closed, Anglo California National Bank of San Francisco, subscription agent, has advised the company. The issue was not underwritten.

On the drilling horizon is a new wildcat venture on the east flank of the Alferitz Anticline at Devils Den. Hubbard S., Joseph H. and Harvey A. Russell of Cuyama Valley fame are sponsoring the new test on Sec. 11-25s-18e.

U. P. P. R.' well No. E-56-R at Wilmington now being drilled by Terminal Drilling Co. Left to right: J. W. Hall, driller; L. A. Gibson, derrickman; George E. Kinslow, cathead; C. M. Ireland, lead tong; J. D. Yoho, racker, and Ray Russell.

Continental Oil Corporation's S-301 in the Wilmington field with California Production Service putting down the hole. Left to right: Ralph Fleming, floorman; C. D. Porter, floorman; R. E. Keetle, head well puller and D. J. Mullins, derrick.

Wheeler Ridge Duster

Richfield has written off its San Emidio No. C-2 wildcat on Sec. 22-10n-20w, six miles south of production in the Wheeler Ridge field. Drilled to a depth of 10,074 ft., the test was one of a program the company has been putting down on large lease blocks acquired following discovery of Eocene production in the Wheeler Ridge field.

The company's gross crude oil production dipped to 13,014,000 barrels in the first half of this year, from 13,820,000 in the six months a year ago. Net was 10,108,000 barrels vs. 10,629,000.

Northeast of Antelope Hills, Shell Oil Company's Shell-Intex-Voight No. 33-4 wildcat continues to dig on down below 6500 ft. Present production at Antelope Hills field proper is above 3000 ft.

Warren Petroleum Company, a new entrant in California, has location staked for a wildcat well a half-mile west of Edison field production. Its Warren No. 1 will drill on Sec. 8-30s-29e, west of production in the pool opened eight months ago by Crown Drilling Company.

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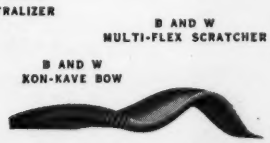

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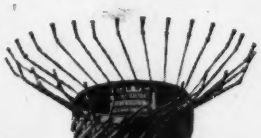

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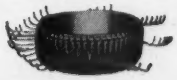

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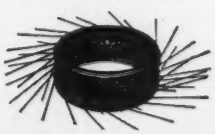

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Tejon Test Works

Standard of California is redrilling at 9980 ft. with its CCMO No. 4-35 wildcat on Sec. 32-11n-19w in the Tejon-Grapevine area, after plugging back from 10,390 to 9824 ft. and setting whipstock. The fresh start was found necessary to get away from fish obstructing the old hole.

Macson Oil Company is digging in the relatively shallow formations with its Twisselman Comm. No. 1 on Sec. 16-27s-18e in the West Shale Hills area. The company's CCMO No. 1 wildcat is a location on Sec. 28-29s-21e, west of production in the Cymric field. It probably will be taken down to 2000 ft. or thereabouts.

In the Temblor area, Pacific Western's Hagood No. 1 test continues to drill on down below 4100 feet. Clyde Hall, contractor, is drilling the well on Sec. 18-30s-21e. Incidentally, Pacific Western has added to its world-wide interests by acquiring a share in some 16,000 acres of prospective oil land in Sicily.

In the Northwest Belgian Anticline field, five miles west of McKittrick, operations still have a roseate hue. For instance, A. J. West has added another excellent well there on fee ground farmed out by Tide Water Associated. The well, TWA Fee No. 2 on Sec. 15-30s-21e, at present is flowing at the rate of 301 barrels of 37.1 gravity oil and 75,000 cubic ft. of gas daily from a bottom of 3465 ft. in the Phacoides sand. Hagestad Drilling Company put the well down, and currently is drilling at 1670 with Moriqui Exploration Company's Anderson No. 5 on the section. No. 5 is located 450 ft. east of Anderson No. 4, which opened the new field last March. Honolulu's Honolulu-Watson CCMO Fee No. 1 on Sec. 15 is making hole ahead below 4400 ft. On test of the interval of 2853-2880 ft., the well flowed oil in quantity from the Phacoides.

David Investment Co.'s Harris No. 1 at Signal Hill. Fowler Drilling Company is drilling contractor. The crew, left to right: F. W. D'dgers, driller; J. Hornberger, derrickman; Joe Stafford, cathead; John F. Adams. (Kneeling) Don Leigh, Jr., mechanic; Lee Faulkenbery, pusher.

In the McKittrick area, Skyline Oil Company is preparing to start its Skyline No. 1 test on Sec. 20-30s-22e.

At South Lost Hills, Tide Water Associated is digging a core hole named Lindsay Hills No. 21A-21 and located on Sec. 21-27s-21e. Contractor is Gene Reid Drilling Company.

Continental Consolidated Oil Corp.'s Well No. A-1 at Long Beach with Santa Fe Drilling Co. handling the job. Left to right: (kneeling) B. J. Nixon, driller; Paul Vandiver, lead tong; Harold E. Provost, racker. Back row, left to right: Bill Falcaner, pusher; Howard Kreitz, derrickman; Edward J. Danner, cathead.

Leffingwell Test Completed on Pump

Signal Oil & Gas Company has won new oil with its Signal-Stern No. 1 wildcat well on Sec. 11-3s-11w at Leffingwell in Los Angeles County. Gun perforated in the intervals of 8262-8272 and 8302-8312 ft., the project at last reports was pumping at the rate of 105 barrels of net 31 gravity oil a day. The well, located a quarter-mile south of the Hathaway Company's Woodward No. 1 discovery, was drilled to a total depth of 8958 ft. and subsequently plugged back to 8530 ft. The 7-inch casing was set at 8530 ft. Hathaway Company's follow-up job to its find, Lochmiller No. 1 on the same section, is drilling at a relatively shallow depth. It is located not far from the intersection of Scott avenue and Lemon drive. The discovery, by the way, showed 360 barrels a day on flow test from a bottom of 8650 ft.

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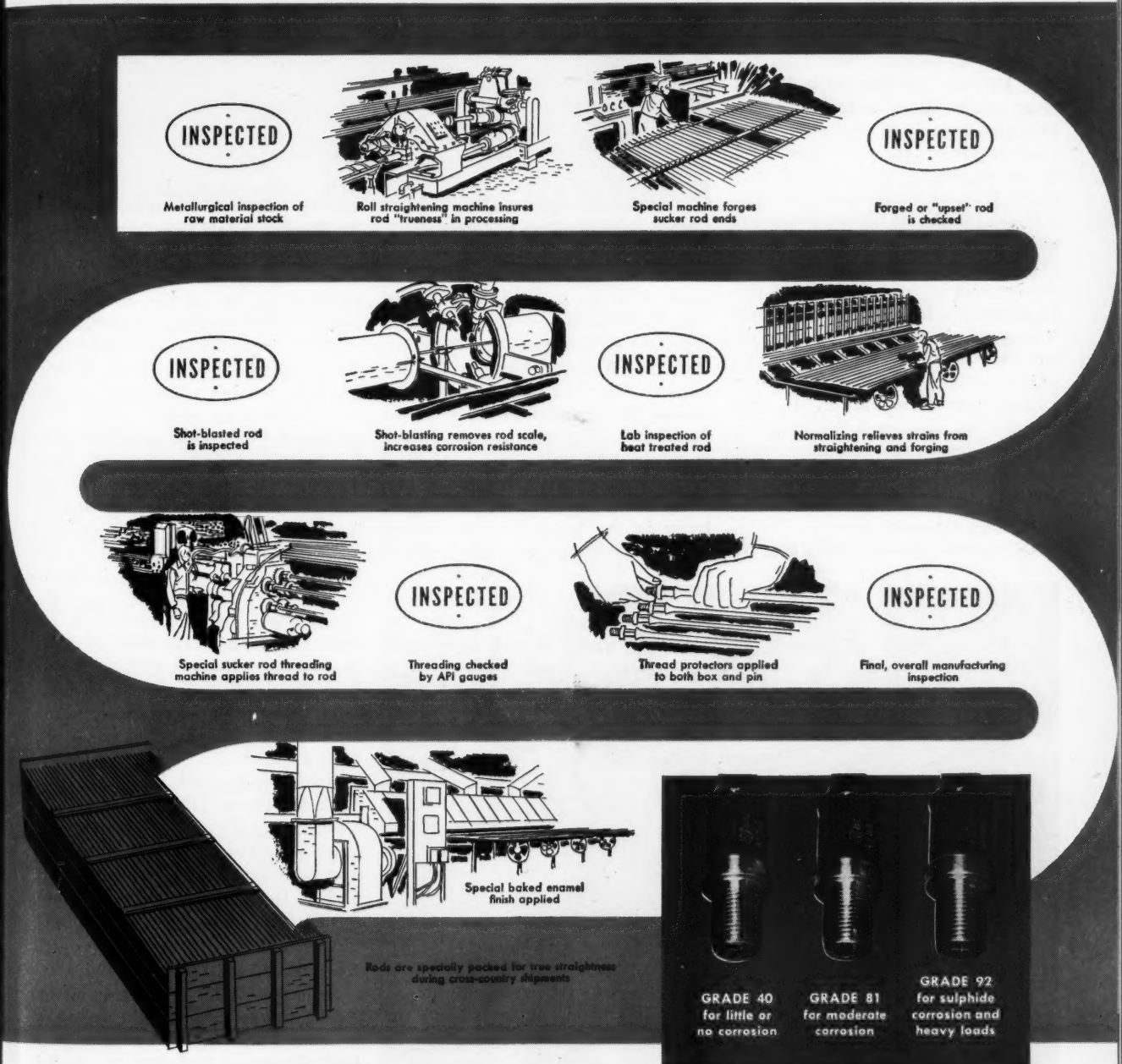
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Rothschild Oil Company has joined the Leffingwell campaign and is putting down its Fouquet No. 1 test several hundred ft. below topsoil. It also is located on Sec. 11-3s-11w.

On a 40-acre parcel on Sec. 29-4n-15w or about a mile and one-half north of Placerita, Western Empire Petroleum Company is about to start the drill in its Curran No. 1 wildcat. The objective is shallow production anticipated between 1600 and 2000 ft. Nearby Placerita Canyon once was the scene of considerable gold mining.

At Newhall-Potrero, Sunray Oil Corporation's Rancho San Francisco No. 117 test on Sec. 34-4n-17w is being drilled below 4000 ft. by Sun Drilling Company as contractor.

Three miles south of its recent find in the vicinity of the old San Fernando Mission, Standard of California is digging in the shallower formations with its Coffman No. 1 on Sec. 18-2n-15w in the Granada sector. Standard's development work is in close proximity to the old trail of the Franciscan Padres, which ends at the mission. At one time it led over the mountains and came into the valley just above Olive View Sanitarium. It was through this same pass that Tiburcio Vasquez, the notorious outlaw, rode when working his infamous trade on the fringe of Los Angeles.

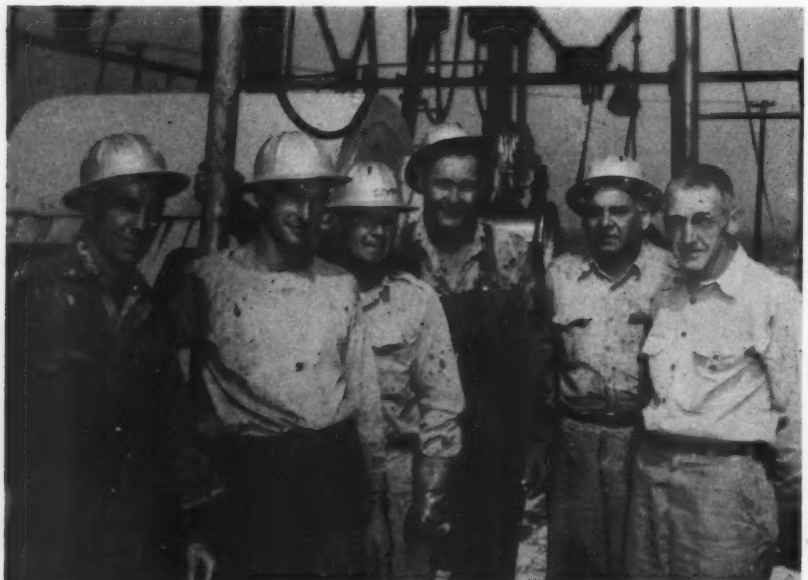
General Petroleum Corp.'s Terminal No. 2 in the Wilmington field with their own crew handling the work. Left to right: Pete Rasey, racker; W. H. Burgess, driller; E. G. Abelsen, pumper; V. Ward, lead tong; Ray Kimbriel, derrick and R. L. Roberts, cathead.

Port Sites Okayed

Moving to increase production of crude oil at the Los Angeles port, the Board of Harbor Commissioners has approved 43 new well locations for Richfield Oil Corporation and has requested that recommendations for leasing an undeveloped area be brought in. The unleased area covers approximately 500 acres, south and east of present Long Beach Oil Development Company and Richfield tracts in the harbor district. It was estimated that about 75 wells could be put down in the area on the bases of present calculated limits of production.

There is probably no affinity between petroleum and Death Valley, but it is certainly of geologic interest that the first discovery of a tusk of a mastodon, a huge prehistoric elephant, has been made in that part of California. Reported by Dr. Thomas Clements head of the geology department of the University of Southern California, the curved tusk is 39 inches long and eight inches in diameter at one end and four inches at the other. It was found protruding out of sand and rocks on the bank of a recent stream channel. This wash led from the dry bed of what was once a large lake in the north segment of Death Valley in the Pleistocene era some 15,000 to 20,000 years ago.

Having just pulled out of one duster in the Puente Hills area, Shell Oil Company is digging away with another test. The company's Bartholomae No. 22-22 on Sec. 22-2s-9w quit at 4022 ft. The new try, Bartholomae No. 46-11 on Sec. 11-2s-9w, is drilling below 1000 ft.



L. B. O. D.'s J-3 at Long Beach being put down by Acme Drilling Co. Left to right: I. R. Burchfield, lead tong; C. Van Leeuwen, derrickman; Griffin Graham, cathead; Roy Hughes, racker; A. B. Brown, driller; O. O. Dennis, pusher.

Rosecrans Test Drills

Drilling is continuing without undue incident in Bell Petroleum Company's interesting test well in the Rosecrans area. Known as Anderson No. 1 and located near the intersection of San Pedro street and Compton boulevard, the well is drilling at 2000 ft., with

Dunlap & Graham in charge. It is on Sec. 20-3s-13w.

Tide Water Associated Oil Company is drilling at 1350 ft. with its McNally No. 1-36 wildcat in the La Mirada area. Interest in the well is shared by Tide Water with Ted Sterling and Paul Trousdale. The drill site is about 1500 ft. from General Petroleum's Librown test, drilled some years ago in Sec. 21 to 12,600 ft. This earlier test picked up oil and gas showings of promise and for a time produced in quantity. Additional work on the well resulted in water troubles and operations at this location were consequently suspended. In the Puente Hills, Tide Water is ready to drill its Bryant Ranch No. 1 exploratory well on Sec. 21-3s-8w.

A new rig silhouettes the Sunny Hills Ranch in Orange County, where Richfield is engaged in preliminary work on its Edwards No. 1 wildcat on Sec. 15-3s-10w.

In the La Habra area, Max Pray has abandoned his La Habra Comm. No. 1 wildcat on Sec. 4-35-10w at an even 7700 ft. A final check of the well's possibilities was taken by sidewall sampling.

B. & H. Oil Company's Stockwell-Pool No. 1 test on Sec. 33-3s-9w in the Richfield area is being taken down on contract with Petrie Drilling Company. The well is still above critical levels.

Oil Field Legislation An Accomplished Fact

Assembly Bill 3048 amending Section 2980 of the Civil Code was signed by Governor Warren on July 10th and becomes a law on September 9, 1953.

The enactment of this legislation is the consummation of a lot of hard work by certain members of the Oil Field Division of the Credit Managers Association of Southern California, and we are indebted to W. A. MacMullen of the Bethlehem Supply Company of California for the following summary of this code section and its meaning to those extending credit in the oil producing industry.

Section 2980 governs the recordation of conditional sales contracts on live-stock, mining, and oilwell equipment. In 1927 Section 2980 was placed on the statute books of this state and governed only conditional sales contracts on live-stock. Subsequently, in either 1933 or 1935, mining equipment was added to the Section. Later the courts determined that oilwell equipment was mining equipment and the law was later amended to include oilwell equipment.

This law required that conditional sales contract on the personal property mentioned above must be recorded in the county of residence and the county of location, should it differ from the county of residence, on or before thirty days after its completion and also that each conditional sales contract must be recorded within twenty days after the movement of the property into any other county. If the material was moved out of a county and then back in, it must again be recorded or the lien rights of the seller would be lost as to third parties.

At the beginning this law did not particularly burden the supply companies as oilwell equipment was not as highly mobile and portable as it is today, therefore, not much concern was given to it. As equipment became readily mobile, this law made it necessary for suppliers to continually police the movement of equipment sold under a conditional sales contract. As you can readily see, this was a problem.

Six years ago the Oilfield Division of the Credit Managers Association of Southern California appointed a legislative committee of which I was chairman, to find out what could be done to correct the law. First, we tried to get the law repealed on the theory that it was discriminatory and which we believe it is, as the three items mentioned above are the only ones on which conditional sales contracts are required to be recorded. We met with no success and learned that it was practically impossible to eliminate an existing law that would give some protection to innocent third party purchasers. Four years ago we had a bill introduced to change the recording requirements under the existing law, but unfortunately it died in committee. Two years ago we again had a bill introduced and employed a lobbyist. The bill did not meet with any particular opposition, but live-stock was eliminated from Section 2980 and placed in a new category so that when the bill was actually passed and signed, it was ambiguous in its wording and attorneys for the various supply companies were afraid of it and felt that we had gained nothing.

This year we again had a bill introduced which did not change the basic principle of the law, but would clarify it to the extent that it said in plain simple English that a conditional sales contract on oilwell supplies must be recorded within thirty days after its execution in the county of residence and in the county of location, should it differ, and that is all, which means that no further recordation will be necessary to protect the lien rights of the seller.

The recently organized Hondo Drilling Company of Lynwood is busy on several contract jobs in California areas. Joe Smith is company president and superintendent, Donald L. Cox, vice president, and Harold D. Gregg, secretary-treasurer.

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Wyoming

Taylor Oil Co. has completed an extension five miles from previous production in the active Clareton field of Weston County for an initial production of 720 barrels per day. The well is the No. 1 Bruce, sw, sw sw 14-52n-66w. The well was drilled to 7105 feet total depth and pay sections were found at several intervals.

Weston County is one of the most active in the state, with at least 40 rigs currently active in the Clareton and Southwest Clareton areas. Another important test in the general area, but a rank wildcat, the No. 1 Hammond-Gaskill in 14-41n-66w, logged a possible 12-foot pay section and was waiting on completion attempts. W. W. Flenniken is the operator. The oil showing was in the Newcastle sand from 7040 to 7052 feet. Seven-inch casing was set to 7150 feet total depth, and it was planned to perforate opposite the interesting section.

In Natrona County, Houston Oil Co. was planning to plug back the No. 2 Burke Ranch Unit to the Dakota after finding water in the Tensleep. Oil shows were found in a 14-foot section of the Dakota on the way down. Top of the Dakota was logged at 6653 feet, and the well was drilled to 8367 total depth. The test is north of Casper in nw nw nw 18-37n-78w.

In its South Sand Draw wildcat, the No. 1 Unit, se nw se 36-32n-95w, Sohio Petroleum is reported to have taken an interesting core in the Phosphoria, which previously had shown for black oil production in this sand and for gas in the Fifth Frontier. The Fifth Frontier was topped at 5050 feet, and the Phosphoria test was from the interval 8181-91 feet. Operator was planning to test the interval where the recent core was taken.

In a test near the Manderson Unit in Big Horn County, Socony-Vacuum Oil Co. was taking a core at its test in sec. 4-49n-92w after finding some saturation in a previous core. The new sample was believed to include a section of the Phosphoria. The same company was drilling in the Phosphoria at its well in sec. 26-47n-92w in the South Frisby Unit of Washakie County, and a test of the interval 10,745-10,833 feet recovered heavily oil and gas cut mud.

Mountain Fuel Supply plugged the No. 1 Fletcher, a scheduled Mesaverde test, at 3241 feet total depth. The test was in sw nw ne 4-27n-113w in the Tip Top area of Sublette County.

Esperado Mining Co. has scheduled Dakota and Frontier tests following purchase of a block of 2100 acres from the North Shoshone Syndicate in Park County. One oil well and one gas well well previously had been drilled on the block.

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Montana

Following recovery of 250 feet of 51.8 gravity oil from the Greybull sand at the No. 1 Stow, Carroll J. Kirk set seven-inch casing to 5958 feet and prepared to perforate opposite the productive formation. The No. 1 Stow, nw nw se 14-7s-22e, in the Golden Dome field of Carbon County, is a new pay zone discovery for the field. The drill stem test was at the interval 5844-88 feet. The well was drilled to 6060 feet but found water in a test of the lower level.

Shell Oil Co. has staked location for a wildcat in the Golden Gulch area of McCone County, a mile and a half northwest of Mississippian production in the Richey field. The wildcat is No. 11-21E NPRR in sec 21-23n-49e and will test the Ordovician expected at 10,000 feet. Another Ordovician test is under way three miles northwest of Richey production. T. F. and R. V. Hodge and associates are drilling the No. 1 Wilbur Eggebrecht in sec. 3-23n-49e on the Northwest Richey Prospect.

Farmers Union was continuing to

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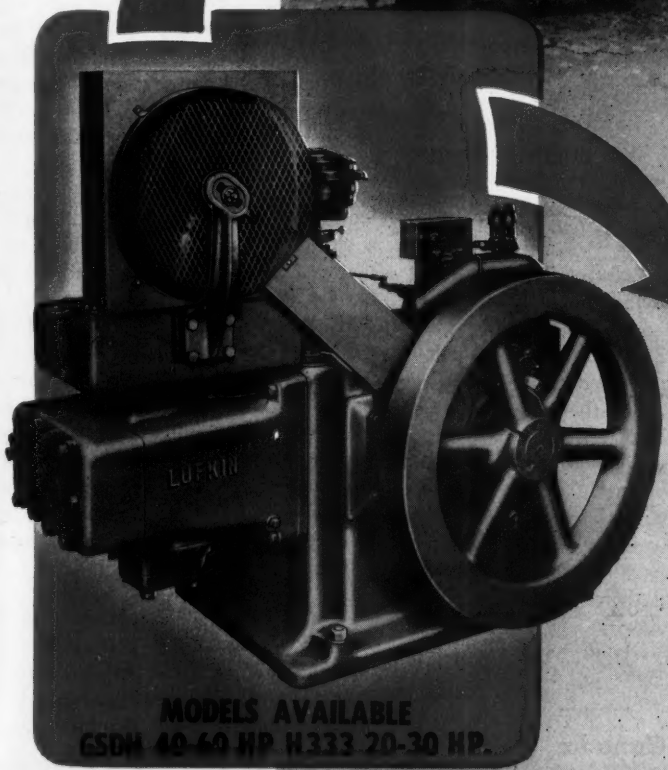

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test the No. 2 NPRR ne nw se 5-10n-25e in Musselshell County, in which oil was found through perforations at 2175-85 feet, believed to be in the Heath formation.

Ralph E. Fair and Ashland Oil and Refining were testing the No. 1 Parker on pump after swabbing 10 barrels of oil per hour. The well is in ne nw sw 5-37n-4w, Toole County in the northwestern part of the state.

North Dakota

Amerada Petroleum was coring around 10,560 feet at its No. 2 Lars Kvam in the Beaver Lodge pool after recovering 37 barrels of oil on a four-hour drill stem test of the interval 10,442-500 feet. The Jefferson formation was topped at 10,050 feet. The well, in c sw ne 19-156n-95w, is in the center of the field, in Williams County.

In Bottineau County, Cardinal Drilling Co. abandoned the No. 1 Bennison after drilling to 3688 feet total depth in the Lodgepole. The test was in sec. 121-61n-75w. In the same county, Sohio Petroleum found oil shows in samples from the Spearfish and resumed operations at the No. 1 A. M. Artz, sec. 14-163n-82w. A later drill stem test revealed a slight oil show. At last report operator was drilling at 3650 feet.

Colorado

Gas at the rate of one million cubic feet per day and 600 feet of oil were recovered by Harry Royster, Denver independent, at the No. 1 William Porter, in Weld County. Recovery was from the D sand in a test of the interval 6466-76 feet, the sand being topped at 6466. Operator was drilling ahead for a test of the J sand prior to completion. Location is in ne ne nw 25-5n-61w.

British-American Oil Producing Co. was continuing to test the No. 1 Jorritsma, ne sw sw 12-11n-53w, in Logan County, after encountering a flow of 412 barrels of oil on a 24-hour test through quarter-inch choke. The recovery was through perforations at 5360-70 feet in the J sand.

At its No. 1 Govt.-Scott, se se ne 21-2s-57w, in the West Badger Creek area of Adams County, Fallon Gas recovered 176 barrels of oil in a 17-hour swabbing operation. The well is bottomed at 5404 feet total depth.

Utah

Activity in the Uinta Basin was picking up with announcement of new tests by four separate companies. Sunray Oil, Cities Service, New World Oil, and Carter Oil all announced locations for tests.

In Emery County, P. B. English and Byrd Frost tapped the Moenkopi formation for gas recovery rated at 5,280,000 cubic feet per day at the No. 1 Federal-Rath, c se sw 18-26s-7e. Production was from the interval 2550-2735 feet.

New Mexico

Basin Natural Gas has announced a program to drill 25 wells in the San Juan Basin on acreage farmed out from Stanolind Oil and Gas Co. This is a new company, with headquarters at Aztec, N.M. A. L. Bergere of Los Angeles is president.

The New Mexico Geological Society has announced that its annual field conference will be held Oct. 16-18. Edward C. Beaumont of the U. S. Geological Survey at Albuquerque is conference chairman. Persons desiring reservations may obtain them through P. T. Hayes, secretary of the society, P. O. Box 187, University of New Mexico, Albuquerque. Registration will be at El Paso Oct. 15.

Nebraska

Natural Gas and Oil Co.'s No. 1 Robinson in Kimball County has been completed as a J sand producer for a potential of 250 barrels of oil per day. The sand was topped at 6002 feet and the section from there to 6029 feet perforated. The well is in ce½ se se 26-15n-55w east of the town of Kimball and is on land farmed out from Sinclair Oil and Gas.

Roden, Darden & McRae swabbed water and a small amount of oil from the J sand at their No. 1 Rienka, sw se sw 7-12n-52w, in Cheyenne County. Swabbing was continuing, at last report.

Western Canada

Five companies which joined in a drilling venture in the Hamilton Lake field of Alberta, on acreage farmed out from Sun Oil Co., have successfully completed their initial well, the Redwater-Davison-Merrill Hamilton Lake No. 13-34, and have announced plans to drill three more in the area. The discovery has been placed on production after operators recovered up to 35 barrels of oil daily in swabbing tests.

Edoran Oil Corp. was preparing to place on production Edoran Britco No. 7 in the Dulwich area of Saskatchewan. The well, an offset to Edoran No. 6, showed for 32 feet of pay sand, from 1808 to 1940 feet.

The No. 1 Deep Test drilled by National Petroleum Northland Oils and Regency Oils a mile and a half north of the border in Alberta, flowed as high as 500 barrels of 38.3 gravity oil per day on test from the Lower Mississippian. The 500-barrel flow was cut one-tenth of one per cent, and on a subsequent test of similar duration there was a flow of 250 barrels of clean oil. Production was from the interval 6134-6216 feet. The well is located in lsd 8-7-1-21w4 and is on the Del Bonito anticline.

An open flow potential of 168 million cubic feet of gas per day has been indicated for Canadian Gulf Oil Co.'s W. F. Bruder No. 1 in the Pincher Creek field. The well has been shut in, waiting for market of the gas and by-products. The well is in lsd 10-21-4-29w4, 17 miles from the town of Pincher Creek, Alberta.

Consolidation of Mill City Petroleums and Leduc Consolidated Oils on a share-for-share basis has been announced. The new company will be known as Mill City Petroleums, Ltd., with Ward B. Tennis of Mill City coninuing as president.

An increase of 26 cents per barrel in the posted price of Alberta crude oil has been announced by five companies—Imperial Oil, Royalite, British American, Canadian Gulf and McColl-Frontenac. The advance was influenced by the recent 25-cent increase in United States prices.

J. W. (Jack) Harding, widely known consulting geologist, has opened new offices at 307 4th Street, Bakersfield. His headquarters formerly were at 5421 Monlaco Road in Long Beach.

Lowell Stanley, chairman of the board of Monterey Oil Company, Los Angeles, has announced the election of Martin N. Erck as secretary and Earl E. Wilkson as assistant secretary.

Greatest Gasoline Development in 31 Years!

Up to 15% more power
Up to 150% more spark plug life

TCP*, a Shell discovered additive, now blended into Shell Premium Gasoline, puts an end to greatest cause of power loss in automobile engines.

Strange as it may seem, the majority of cars on the road today are not putting out their full horsepower.

Perhaps you may have noticed that your power "falls off" especially when accelerating, climbing a hill, or driving on the open highway.

The reason is that, in the average engine, deposits are constantly accumulating on the spark plugs and in the combustion chambers. They actually "short-circuit" your spark plugs and cause pre-ignition of the fuel mixture, especially when you want extra power and "step on it" hard!

To overcome this condition, Shell Research discovered TCP—a remarkable fuel additive which has the property of counteracting the power-wasting effect of these deposits.

As a result, Shell Premium Gasoline with TCP additive gives you up to 15% more power, up to 150% more spark plug life, *plus an increase in gasoline mileage.*

Shell Premium with TCP is the most significant development in gasoline since the introduction of tetraethyl lead in 1922.

Shell Premium with TCP quick to act

So rapidly does Shell Premium with TCP additive counteract the deposits on spark plugs and in combustion chambers, that you'll feel your engine's had a tune-up before you've finished the second tankful. You enjoy that new car pep again.

NOW IN YOUR TOWN
but only at your Shell Dealer's

TCP is Shell's trademark for the remarkable additive originally developed by Shell Research for aviation fuels. Until now has been largely restricted to military aircraft.

Now at all Shell Dealer Stations.

*Patent applied for

SHELL PREMIUM GASOLINE

The Most Powerful Gasoline Your Car Can Use

SHELL

Personalities IN THE NEWS

Kinder to Direct All Emsco Sales

Appointment of William C. Kinder as vice president in charge of all Emsco Manufacturing Company sales is announced by William T. Powell, president.

William C. Kinder

For the past twelve years, Mr. Kinder has been in charge of manufacturing and sales of the D+B Division of Emsco, and three years ago transferred from Los Angeles to Garland, Texas, upon the completion of the new D+B plant at Garland.

In his new position, Mr. Kinder will be responsible for the sale of all Emsco and D+B products, and in connection with oil field equipment sales will take over the duties of J. T. Tucker, general sales manager, who resigned effective July 16.

Members of the new Essex Drilling Company of Los Angeles include Russell L. Metty, Louis Vos and Ambrose M. Fish.

The new Bakersfield scout group, flying the banner of the Central California Oil Scouts Association, has been accepted for membership by the National Oil Scouts and Landmen's Association, with headquarters at Austin, Texas. Floyd Tincher, Union Oil Company, is executive chairman of the Bakersfield organization, and Cliff Edmundson, Shell Oil Company, meeting chairman. Bob Rist, Monterey Oil Company, is secretary, and Yale Langworthy, Bankline Oil Company, treasurer. Lamphere Graff, Standard Oil Company, has been named editor of the Bakersfield group's review. Meetings are held each Wednesday at the Bakersfield Inn. Scouts in the Los Angeles Basin and Ventura areas are likely to follow the lead of the San Joaquin Valley oilmen and seek membership in the national organization of scouts.

Willard D. Shirey of Lebec has retired after 51 years in the oil fields. He has been field superintendent for Reserve Oil and Gas Company in the Tejon Ranch area for the last 16 years. He came to Reserve in 1938 from the Union Pacific Company at Wilmington.

David T. Staples, who recently became president of Tide Water Associated Oil Company, has been elected a member of the Western Oil and Gas Association board of directors.

Union Oil Company's new marketing territory, covering its present Central American division and all of South America, is in charge of J. W. Graham, who is making headquarters at Balboa, Canal Zone. Graham formerly was manager of foreign sales at the company's main office.

Lane Elected Vice Pres. of Continental

Olen Lane, Los Angeles, western region general manager for Continental Oil Company and well known in West Coast oil circles for the past 30 years, has been elected a vice president by the company's board of directors, it was announced by President L. F. McCollum.

Olen Lane

Mr. Lane will continue to serve as Conoco's western region general manager, with headquarters in Los Angeles, said Mr. McCollum.

Continental's western region includes the company's marketing and production operations in California, Washington, Oregon and Nevada, plus marketing activities in Arizona.

A native of Ada, Okla., Mr. Lane attended Oklahoma A. & M. College, Stillwater, and Central State Teachers College, Edmond, Okla. He joined Conoco in 1920 at Ponca City, Okla., and transferred to Los Angeles in 1923 as a landman in the company's western territory.

Following a series of promotions in the land department at Los An-

A DEPENDABLE MEMBER OF YOUR DRILLING CREW

Globe Rock Bits consistently set the pace for high performance and we take pride in our current line of "Integral Jet" Rock Bits for present field conditions and formations. They are the very best, from every practical view point, that can be manufactured to accomplish maximum results at minimum cost and effort.

Globe "Jets" are always dependable... jet nozzles are placed for greatest bottom hole impact so the teeth are constantly working on a clean hole-bottom, getting maximum penetration and formation at every turn of the drill string.

Above: Globe SS2C Jet Bit especially recommended for soft, sticky and unconsolidated formations. Globe 2 and 4 cutter Jet Rock Bits with Tungsten Carbide jet nozzles are available in all popular types and sizes.

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INTEGRAL JET
ROCK BITS

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geles, he was named western region exploration manager in 1950. Late in the same year he was promoted to assistant general manager of the western region. He was elevated to general manager of the western region in March of this year, following the retirement of C. A. Allen.

Baash-Ross Appoints J. L. Barnett, Jr. As West Texas-New Mexico District Manager

Mr. H. Wotkyns, Vice President and Mid-Continent Manager of Baash-Ross Tool Company, has announced the appointment of J. L. Barnett, Jr., as District Manager for the West Texas—New Mexico operations of the company headquartered in the Odessa, Texas, plant. Barnett replaces L. L. (Red) Garren who was recently named Manager of the New Baash-Ross plant in Canton, Ohio.

J. L. Barnett, Jr.

Before joining Baash-Ross in its Houston, Texas, plant shortly after the war, Barnett had spent a number of years working in various phases of the oil industry and had attended the University of Texas where he received his degree in Business Administration. After a period of sales work in the Houston office, Barnett was transferred to Odessa, Texas, where he became District Sales Manager, from which position he moves up to his new duties as District Manager of Baash-Ross operations in the West Texas-New Mexico area.

One of the oil industry's favorite sons, Marion E. Dice, General Petroleum Corporation economics department manager and member of the executive committee, has rounded out 30 years service with the company.

W. E. Lovejoy, who has been with Standard of California since 1924, has been named assistant to the manager in the safety division of the company's personnel department. Lovejoy in the past was personnel supervisor for California Research and Development Company, Standard subsidiary.

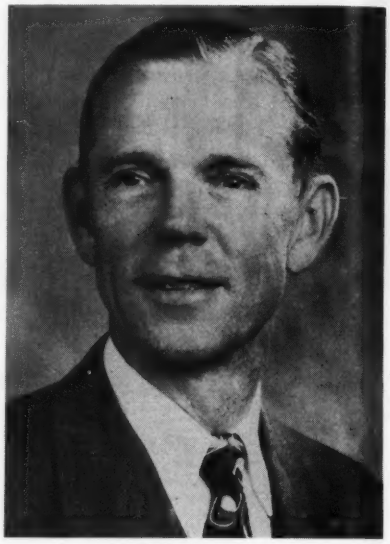
B. Brewster Jennings, Socony-Vacuum Oil Company, Inc., president, was the principal speaker before an audience of Pacific Northwest leaders gathered at Bellingham, Wash., to dedicate the first full-sized oil refinery in the region. The refinery is under construction at Ferndale, Wash., for General Petroleum Corporation, Socony-Vacuum's Western affiliate. The oil executive stated that tariffs mean people are doing things the hard way. "When tariff barriers exist," he added, "there is a loss of efficiency."

Chester (Chet) C. Neff, employed at the main pump house in Shell Oil's Dominguez refinery, was in his earlier days Pacific Coast lightweight boxing champion. At one time he was the featherweight champion of Canada, the Northwest and the Pacific Coast, weighing 122 pounds. As he grew older and heavier, weighing 133 pounds, he won the lightweight championship of Canada, Mexico and the Pacific Coast in the three years of 1916 to 1918. He had a total of 271 fights ranging from four to 20 round affairs.

F. F. Latta, Bakersfield museum director and eminent oil historian, has returned to the Kern County city from Columbia State Park, where he participated in the two-day session of the California History Foundation meeting, sponsored by the College of the Pacific.

Knapp Named Assistant To Patterson

Appointment of J. C. Knapp as his assistant has been announced by Wilson D. Patterson, Pacific Regional Manager of The White Motor Company. Knapp, who has managed the company's Portland Branch since 1949, brings to his new post in San Francisco many years of valuable experience according to Patterson who



J. C. Knapp

said: "Since he became associated with The White Motor Company in 1922, Knapp has demonstrated his ability as Business Manager as well as in important sales capacities. His career has won him wide acquaintance with western truck operators and he is thoroughly familiar with all phases of western motor transportation. His new capacity permits full utilization of recognized ability. Creation of this position as Assistant to the Regional Manager is part of The White Motor Company's program to provide expanded service and facilities to the growing trucking industry here in the West."

It would be a difficult assignment in these good old United States to find one person not acquainted with the air exploits of General Jimmy Doolittle of Shell Oil Company, but it may be news that he was an amateur boxer in his younger days. The General was a good flyweight, but he never tried the professional branch. His fights by succeeding events proved more important than ring boxing.

D+B ENDURALL LINERS

resist abrasion and corrosion

D+B Endurall Stainless Liners have been field-proven to give long, trouble-free service under the most severe corrosive and abrasive well conditions. Case histories prove that D+B Endurall Liners have doubled, tripled, and in some cases quadrupled the normal production life of conventional liners. As a result, the deepest wells with the most severe abrasive and corrosive conditions can now be pumped efficiently and economically with D+B Endurall Liners.

You'll find this to be true about D+B Endurall Liners: **(1)** Developed to run with chromium plated plungers (box-end or pin-end) — their low coefficient of friction provides longer wear, lengthens pump life. **(2)** Can be assembled in the field — no honing required after assembly. **(3)** A full centrifugal casting provides uniform density, finer grain structure, greater strength. **(4)** Precision finished to rigid tolerance, they can be aligned in pump in same manner as H-C-I liners. **(5)** Field-proven through years of excellent performance in the toughest pumping conditions.

For pumping economy specify D+B Endurall Liners. Call your nearest D+B store for service anywhere . . . any time.

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D+B
• SUCKER RODS
• DEEP WELL PUMPS
• COUPLINGS

Rising Crude Oil Demand In Prospect

In consideration of current rate of increase, American demand for crude oil may soar to 10,000,000 barrels daily by 1960, S. A. Swensrud, Gulf Oil Corporation, told Security Analysts of San Francisco. This country now uses close to 8,000,000 barrels a day and produces 7,000,000, with the balance imported, he said. Gulf, which shares with Anglo-Iranian Oil Company the Kuwait oil concession where its division of production is more than 347,000 barrels daily, currently is accounting for some 700,000 barrels of oil from its domestic and foreign operations.

IPAA Cites Big Oil Potentiality

Awaiting the wildcat driller are many hundred billion barrels of petroleum yet undeveloped in the Western Hemisphere, according to the new book, "Petroleum in the Western Hemisphere," published by the Independent Petroleum Association of America. The book claims improved technological methods probably will increase supply by drawing from some 100,000,000,000 barrels of oil that cannot be brought to the surface with present equipment. Attention is called to an American Association of Petroleum Geologists report that possible future oil lands in the United States may extend over about half the total land area of the country.

Many a future driller is learning the rudimentary principles of developing oil at Orange Coast College in Costa Mesa. The two-year course in petroleum technology includes the actual drilling of a well with equipment no different than that being used in nearby Orange County fields. On the well now being put down, students carry out all duties of driller, toolpusher and other members of a crew. Located on the campus, the well is not likely to pick up oil, but it will be drilled to 1500 ft. or more in order that students become thoroughly acquainted with rotary drilling operations and functions associated with casing, mud circulation, slant drilling and fishing jobs.

Oil Well Drilling Course Offered By Long Beach City College

The Long Beach City College will start a new class in the Oil Well Drilling course with the opening of the fall semester on September 14, at the Institute Campus, 1305 East Pacific Coast Highway.

Exploring and drilling for oil in this and foreign countries is the number one phase of this giant industry. It is necessary to drill many hundreds of wells each year in order to maintain a production large enough to meet the ever increasing demands for petroleum products.

This course in Oil Well Drilling Practices is one of two now being offered in the United States, and is being given at the request of the American Association of Oil Well Drilling Contractors who are also giving the College a great deal of assistance in developing the various phases of the course.

The course covers two years and carries with it Junior College graduation.

Some of the subjects covered in the course are:

Drilling Tools and Equipment.

Drilling Problems and Practices.

Chemistry of Drilling Mud Control.

Mechanical Drafting and Mathematics.

Elements of Supervision and Conference Leading.

Industrial English.

U.S. History and Government (Required for graduation).

Labor Economics.

Operation of Combustion Engines (Diesel).

Physical Education (Required for graduation).

Gas Welding—1 semester.

Machine Shop—1 semester.

Qualifications:

The course is open to anyone who is a high school graduate or who has the equivalent in work experience.

Purpose:

To develop skills and knowledge which should equip the individual to advance himself in this vital phase of the Petroleum Industry—

Oil Well Drilling.

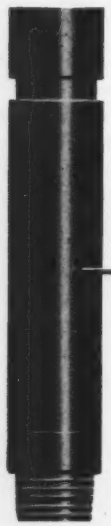
The American Association of Oil Well Drilling Contractors believes that the **Right Persons** with the **Right Training** can become its future **Drillers, Toolpushers** and **Superintendents.**

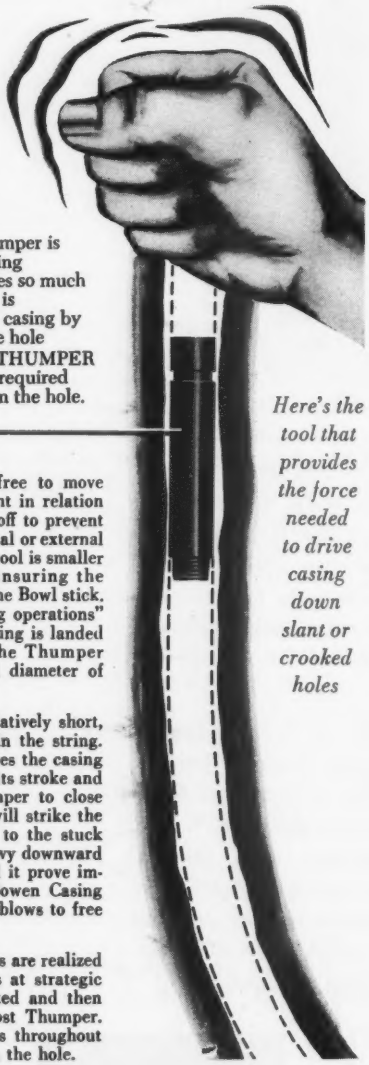
This is a Technical Course for the Training of Future Leaders

Those who are interested or would like further information should apply at the Guidance Office, Room 117, at 1305 East Pacific Coast Highway. Phone 7-6481 Long Beach.

No oil fete, being held these summery days, can be called a real success without the presence of Walt Parker, better known as the Bing Crosby of the petroleum industry. Walt, whose career has been identified with refining as well as many important drilling plays, has a rich baritone voice which woudl have carried him to entertainment heights had he not decided to seek happiness in the pursuit of oil.

the BOWEN CASING THUMPER





Here's the tool that provides the force needed to drive casing down slant or crooked holes

The Bowen Casing Thumper is indispensable for landing casing in slant holes. In such holes so much friction is encountered that it is impossible to land the casing by simply lowering it into the hole and the BOWEN CASING THUMPER provides the additional force required to drive the casing down the hole.

SIMPLE CONSTRUCTION

The Mandrel and Bowl are free to move longitudinally a limited amount in relation to each other and are packed off to prevent fluid leakage from either internal or external pressures. The coupling of the tool is smaller in diameter than the Bowl insuring the ability to strike blows should the Bowl stick. All types of "inside the casing operations" can be conducted after the string is landed because the bore through the Thumper corresponds with the internal diameter of the casing.

EASY TO OPERATE — When the casing string is relatively short, the Bowen Casing Thumper is installed midway in the string. Should the casing stick, the operator merely elevates the casing sufficiently to open the Thumper the full length of its stroke and then drops the string. This will cause the Thumper to close quickly and the lower end of the Knocker Head will strike the Bottom Sub — delivering a solid downward blow to the stuck casing below and driving it down the hole. The heavy downward blow can be repeated as often as required. Should it prove impossible to drive the casing down the hole, the Bowen Casing Thumper can be used effectively to strike upward blows to free the casing and permit its withdrawal.

When the casing string is relatively long, best results are realized by installing a series of Bowen Casing Thumpers at strategic intervals in the string. When the casing is elevated and then dropped, the first blow is struck by the uppermost Thumper. This initiates a chain reaction of downward blows throughout the series of Thumpers and drives the casing down the hole.

Write for descriptive literature

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SANTA FE SPRINGS, CALIFORNIA
VENTURA • BAKERSFIELD • AVENAL • NEWHALL
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Export: S. R. BOWEN CO., 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

BJ MEANS ENGINEERED OIL TOOLS

BJ PB

Byron Jackson Co. Since 1872

LOS ANGELES NEW YORK FORT WORTH HOUSTON

A. M. Birnie Tours Security's Mexican Oil Fields

Recently returned from a tour of Mexican oil fields is A. M. Birnie, general sales manager for Security Engineering Division, Dresser Operations Inc. Birnie, whose itinerary included a visit with officials of Pemex, toured the Posa Rica and Tampico oil fields, spending time in each checking Security equipment run in the respective fields.

Commenting on the trip, Birnie pointed out that the Mexican drilling rigs are utilizing every new modern drilling method that has been devised in developing their vast oil deposits. Frank Leonis, western regional sales manager of Security, accompanied Birnie on the Mexican trip.

There is never a dull moment around the beautiful estate of Clair Gibson, the popular oilman, atop a mountain in West Bel-Air. Mack, the Gibson houseboy, recently shot a snake with no less than 17 rattles. Clair the other day espied seven deer grazing on his estate.

George Scrimshaw, prominent Dallas oilman, is a guest at the Beverly Wilshire Hotel. His visit to Southern California at this time is largely in the interest of his main avocation, tennis, rather than the business of oil.

Harold W. Sanders, Union Oil Company vice president and treasurer, was the guest speaker before a luncheon meeting of the Los Angeles Society of Security Analysts at the Los Angeles Biltmore Bowl. He discussed recent developments within the company and what effect they are expected to have on the future of the California oil organization. He also touched upon conditions current in the petroleum industry.

Union Oil's Haines Finnell, now head of the company's marketing and research departments, has given automobile users something to mull over. He pointed out that motorists are overlooking a money saving opportunity when they don't pay an extra four cents a gallon for premium fuel. Taking a base figure of 6800 miles for the total mileage used in a year, he explained that it cost motorists only $18.12 a year more to use Union's premium fuel instead of regular gasoline. In many instances, Finnell said this figure is less than amount involved in a good motor tuneup.

Geologist John W. Yeager, who the other month joined the Bakersfield office of Ohio Oil Company, has an enviable record as a globe-girdling sailor behind him. He served five and one-half years with the Merchant Marine in the Great Lakes, Mediterranean areas and Atlantic, and for two and one-half years in the U. S. Navy in the Pacific. He came out of service a Lieutenant JG. He received his degree at U.C.L.A.

Baash-Ross Appoints Tom Ray, Jr., As Sales Representative

Mr. R. L. LeBus, Jr., Oklahoma District Superintendent of Baash-Ross Tool Company, announces that Mr. Thomas Ray, Jr., has been named sales representative to handle the company's sales operations in northeastern Oklahoma and southern Kansas. Ray will be headquartered in Tulsa, Oklahoma where he replaces Mr. P. R. Nagle, who was recently moved to New York as Assistant Manager of Baash-Ross Export Operations.

Tom Ray, Jr.

Ray brings to his new duties some twelve years of experience in oil field sales and service work, most of it in the Oklahoma area. He will be located at 3717 South Richmond, Tulsa, Oklahoma, (Phone: 72-1903).

Joe Brown, Security's Export Representative Tours Central and South America

Joe Brown, Security Engineering Division's export representative, has recently returned from an extensive tour of oil fields in Central and South America. Travelling an itinerary that included stops in Trinidad, Lima, Venezuela, Caracas and Maracaibo, Brown spent time working with oil company officials on their drilling problems and outlined new drilling equipment developed by Security.

Back at his home office in Fort Worth, Texas, Brown is currently devoting part of his time to conducting Latin American oil men through the new Security plant recently erected in nearby Dallas, which is devoted exclusively to the manufacturing of Security 3-cutter rock bits.

Squeeze Cementing

(Continued from Page 6)

the Union Oil Company of California.

Paper Delivered at A.P.I. Division of Production, Los Angeles Meeting

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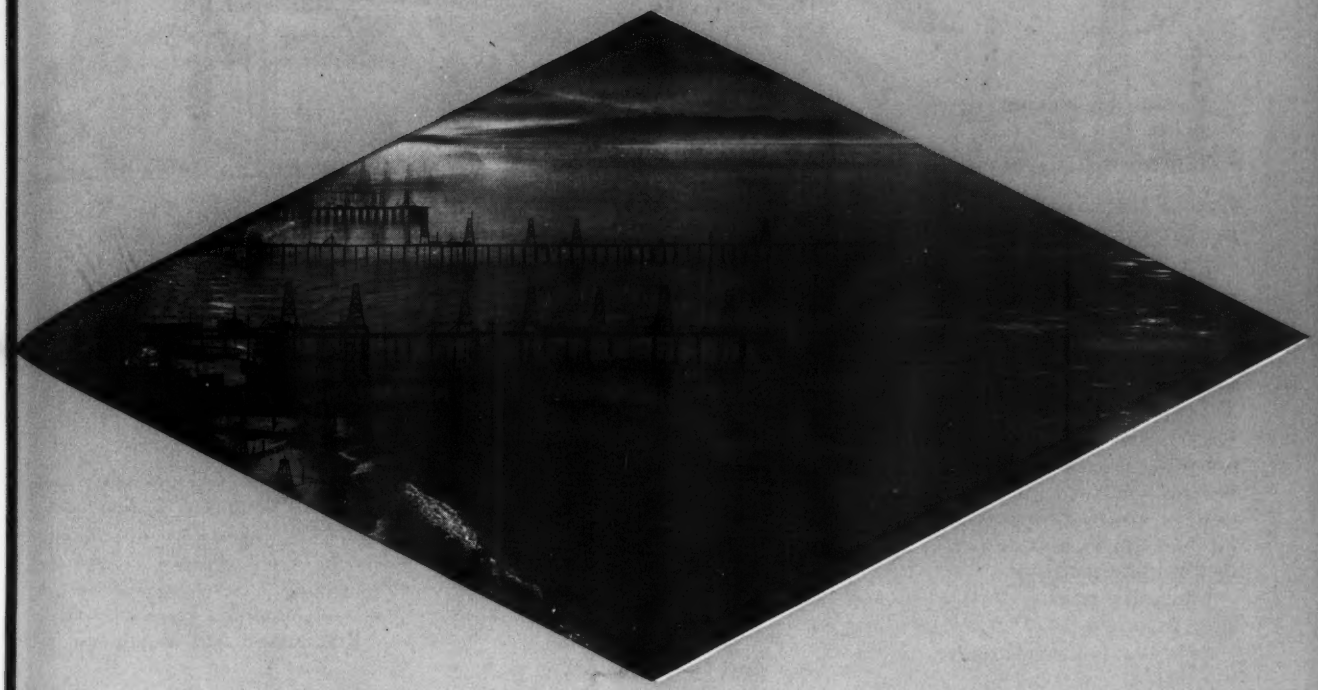
*Bleed-off pressure refers to the slow decline of pressure during the waiting period after pumping the cement. This decrease in pressure is believed to occur when the annular fluid cement seeks equilibrium after displacement surges by the cementing pumps.



Kobe for Better Pumping

"Kobe's leadership in oil well pumping equipment is best expressed by those fields where Kobe Free Pumps are specified 100%. The number of such fields is steadily increasing."

FREE PUMP

KOBE

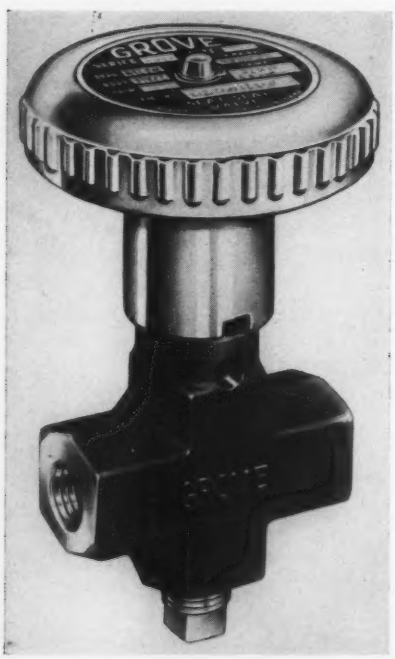
KOBE INC. Division of Dresser Equipment Co.
HUNTINGTON PARK, CALIFORNIA — OKLAHOMA CITY, OKLAHOMA

Grove Introduces New Products

In applying the Grove "Seal-O-Ring" principle to quarter-inch and half-inch valves for pressures of 3,000 to 10,000 psi, Grove Regulator Co. has introduced the Series T-2 Triport Valves, and Gauge Cocks. Resilient "O" Ring Seals are utilized in the seat assembly to provide bubble-tight shut-off for flow in either direction, as well as on the stem, to replace conventional stuffing box packing.

Minimum wear is claimed to result from the fact that the stem slides open and closed without turning. It is actuated by the handwheel, threaded to the outside of the integral bonnet. This provides an external non-fouling maximum threaded bearing surface for smoother operation. A safety stop prevents stem from being forced out by excess pressures. Also, a safety shear ring makes it impossible to back stem out through excess turning on hand wheel.

Grove Seal-"O"-Ring Series T-2 Gauge Cock



Grove Seal-"O"-Ring Series T-2 Triport Valve

Wiping action of the "Seal-O-Ring" retainer and the stem "O" ring are said to keep parts free from damage by foreign matter. This assures a tight seal and maintains exceptionally free valve action. Shut-off is accomplished by the lower rim of the stem which compresses the flexible "O" ring seal between the seat, body and stem. Secondary metal to metal contact is made between the stem and the seat.

Both half-inch and quarter-inch Series T-2 Triport Valves are available for 3,000, 5,000 and 10,000 psi. Half-inch Gauge Cocks are furnished for 10,000 psi in globe or angle design. Series T-2 valves are recommended by the manufacturer for meter manifolds, gauge lines, blowdown, and similar services.

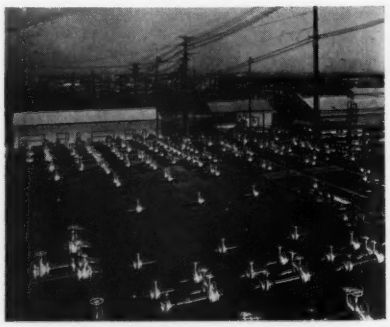
Complete information may be obtained from Grove Regulator Company, 65th & Hollis Streets, Oakland 8, California, or from any Grove division office or representative.

Hydro-Test Appoints Reps In Wichita Falls and Great Bend

Hydro-Test, Inc., of Long Beach, expanded facilities for testing tubing by the recent appointment of two new representatives: Tube Testers, Inc., in Wichita Falls, Texas; and McAdams Pipe & Supply Co., in Great Bend, Kansas. The Hydro-Test method of testing tubing under hydraulic pressure while being run back into the well is available also in the Gulf Coast, Houston, Kilgore, Odessa, Oklahoma City and California districts.

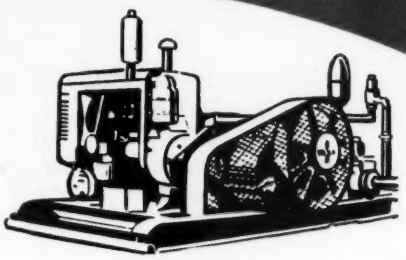
Tube Testers, Inc., operating from Wichita Falls, Texas, is headed by Paul Jamison and Clayton Hamm, formerly field representatives for Worth-Well Surveys out of Odessa. They service nine counties in southern Oklahoma and north central Texas.

To the old timers, McAdams Pipe & Supply Company of Bristow, Oklahoma, needs no introduction. They recently moved into Great Bend, Kansas, and secured Hydro-Test for that district. Each of these new representatives has one of the new Hydro-Test field units with the second truck for each now in process of fabrication at the Long Beach plant.



One hundred and sixty-nine Hamer Rigid-Type Line Blind Valves have been installed by the Union Oil Company during recent modernization of the main pump house manifold at their Wilmington refinery. The Hamer Line Blinds, which insure positive, permanent shut-off of the line, eliminated the need for an equal number of gate valves in the manifold. Due to conditions which prevent spreading of the pipe lines, the Hamer Rigid-Type Line Blinds employ a unique internal-expansion principle which does not expand the line in even the slightest degree when valve is opened to reverse the spectacle plate.

FOR RENT



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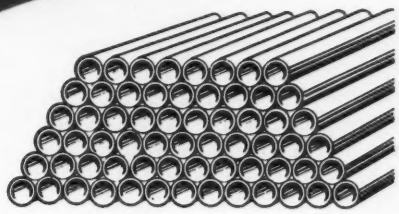

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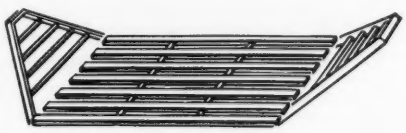

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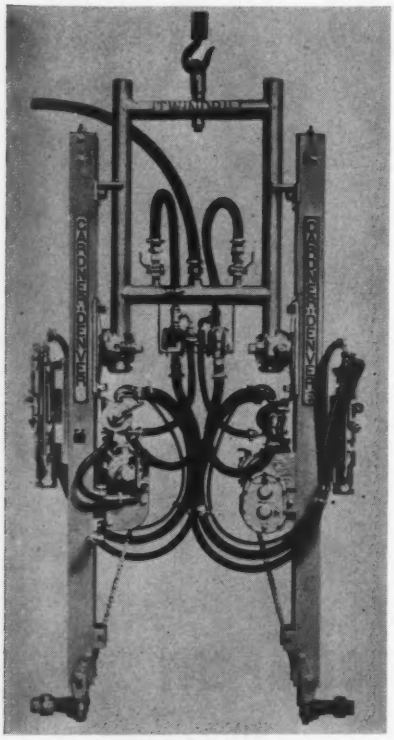
New Twindril Feature Saves Hook-Up Time

The Gardner-Denver Twindril, the pipeliner's rock drill which is widely used wherever rock is encountered along the trench line, now has a new feature which makes it still more convenient to use, according to reports from the manufacturer, Gardner-Denver Company of Quincy, Illinois.

Gardner-Denver engineers simply converted the hollow tubular framework into a compressed air head, and have thus eliminated one of the main air hose connections.

The Twindril is a complete rock drilling unit which is quickly hung from the side boom of a pipe line tractor, and is powered by compressed air from a portable air compressor which is towed along behind the tractor. Formerly, two separate air hoses were required from the air receiver, one going to each drill.

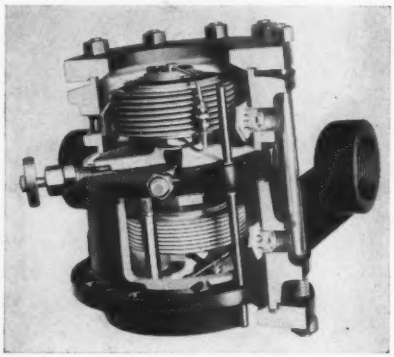
Now, the Gardner-Denver Twindril requires only one air connection between the receiver and the air header. Permanently connected hoses then take air from this header to the controls for each drill. Thus, only one air connection is required for hooking-up or disconnecting the Twindril.



The New Gardner-Denver Twindril

American Meter Announces New Mercuryless Differential Pressure Instrument

Supplementing American Meter Company's regular line of Series A-70 and A-88 mercury manometer orifice meters, a new metal bellows actuated differential pressure instrument, named the DRI-FLO Orifice Meter, has been placed in production by the Company.



The new units are offered for applications where accurate measurement is required without the use of a mercury manometer and are specially designed for ease of installation, accurate performance and minimum maintenance. They are adaptable to all American Pneumatic Controllers, Transmitters, Differential Valves, Telemeters and related instruments.

Outstanding advantages, the Company states, are the one-piece stainless steel bellows construction, direct full scale recording pen movement without external gearing or linkage multiplication, employment of American Meter's nearly frictionless Teflon Seal Stuffing Box, and stainless steel or Monel Metal operating parts. The internal working parts are especially accessible for inspection, calibration or cleaning, by removing one or both case cover heads without disturbing manifold piping in any way. Distortion or bellows damage due to sudden overrange is prevented by stick-proof check valves with flat synthetic seats. An additional bellows compensates for volume changes in bellows filling fluid resulting from ambient temperature variations. A Teflon sealed pulsation dampener for accurate control of response is externally adjustable under pressure. The instruments operate at working pressures to 1000 P.S.I. in differential ranges of 20, 50, 100 and 200 inches, ambient temperatures of -25° to 175° F. American Meter Company will supply complete information on the new DRI-FLO Orifice Meters upon request.

National Issues Bulletin on Multimatic Rotary

The type 205-B Multimatic Rotary, which has built-in, air-actuated slip-operating mechanism and other new features, is presented by The National Supply Company, Pittsburgh, Pa., in Bulletin 399, a 16-page, illustrated brochure.

The bulletin describes the equipment, which is designed for any depth drilling, its features, construction details, operations, and specifications.

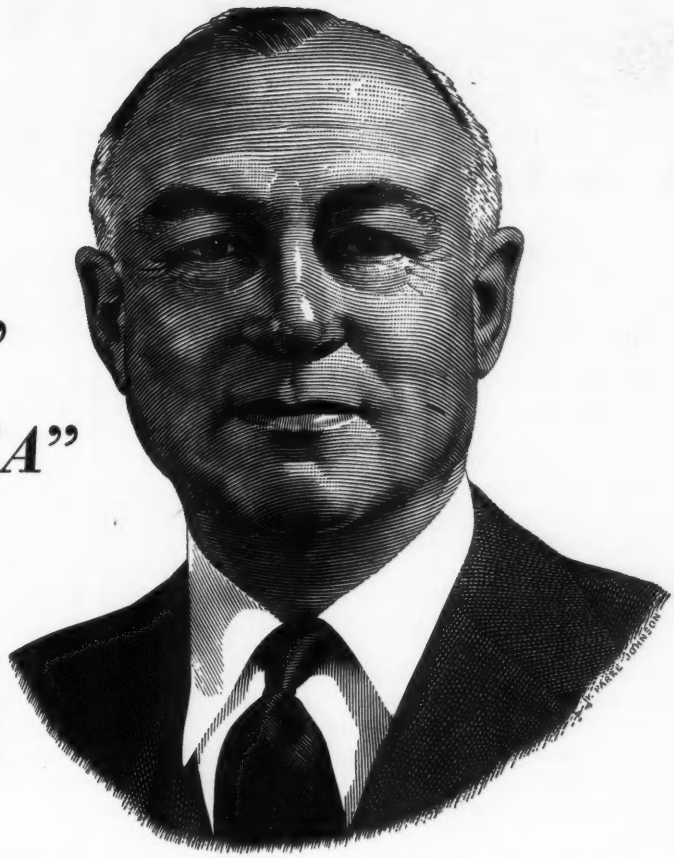
Alaska Exploration Draws Big Operators

Standard of California, Shell Oil Company, Richfield Oil Corporation and Phillips Petroleum Company are among large operators participating in one way or another in the widening exploratory play in Alaska. Oil prospects spread to all points of the territory with the possible exception of southeastern Alaska, Aleutian Island chain and Seward peninsula. Phillips is active in the Katalla-Yakataga area near Cordova, where from 1919 up until two decades ago oil was being produced from a depth above 2000 ft. The refinery at Katalla-Yakataga was destroyed by fire in 1933 and no efforts were made to rebuild it.

Washington Leasing Drilling Forerunner

Continental Oil Company evidently is viewing with favor much ground in the western part of Grays Harbor County, Wash. Indications are that Conoco will launch an exploratory play in the area once the amount of land required is blocked up. Union Oil Company some years ago, undertook extensive leasing in the area and also drilled several test wells. A number of the wells encountered minor oil showings, but the company called a halt to further drilling three years ago.

"...Well done, AMERICA"



GEORGE M. HUMPHREY
Secretary of the Treasury

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• cash sales of Savings Bonds, all series, during the first four months of 1953 totaled $1,741,273,000—22% above those of the first four months of 1952.

• of the approximately $6.7 billion E Bonds which had come due up to the end of April, 1953, $5.1 billion, or 75% were retained by their owners beyond maturity.

• every month, nearly 8,000,000 Payroll Savers purchase about $160,000,000 in Series E Bonds.

For assistance in installing a Payroll Savings Plan, or building participation in an existing Plan, write to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D. C.

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LAUGH

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Back in the days before the horseless carriage, a young man and a young lady got married. Their honeymoon was to be spent at a rather distant place, so it was decided that the first night would be spent in the home of the bride's parents.

After supper when the newlyweds had retired to their room, the bride handed the young man the Bible and asked that he read a passage of Scripture.

To this he replied, "Well, ain't never done it before, but guess I can."

After he had completed reading the Bible, his young bride asked that they have a prayer. The groom said, "Ain't never done it before, but guess I can."

So . . . next morning at the breakfast table, our young hero told his bride's parents and her grandmother that he had done something the night before that he had never done before.

The blushing bride said: "Yes, and we're going to do it every night as long as we live."

Grandma just rolled her eyes and gave them a sympathetic look.

"Did you get home all right last night, sir?" the motorman asked one of his regular passengers.

"Of course. Why do you ask?"

"Well, when you got up and gave the lady your seat you were the only two people on the car."

A nightclub is a place where a fellow finds himself a good spot and sits tight all evening.

I turned right over in my grave
When told how girls on Earth
behave
Now the boys on this nether Moon
Believe that they all died too soon
For late spirits, when they arrive
Tell how they frolicked when alive
"Bathing girls in Bikini suits
Oh boys", they said, "Were they
the beauts"
They drove hot-rods in car races
Played the machines at Las Vegas
Drank tequilla at Tijuana
Owned oil wells near Texarkana
Could I but live life o'er again
And have the chance to say
just when
I'd leave the world and all its sport
You bet I'd never cut it short.

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